THE

NORTHERN

JOURNAL OF MEDICINE;

A

MONTHLY SURVEY

OF THE

PROGRESS OF MEDICAL KNOWLEDGE

AT HOME AND ABROAD.

VOL. I.

1844.

Messrs Oliver & Boyd beg leave to call the attention of Gentlemen of the Medical Profession to the Northern Journal of Medicine, the eighth Monthly Number of which is now issued. They would rest the claim of this Journal to the support of Medical Practitioners throughout the empire, not merely on the merit of the Original Articles, but, in a great degree, on the exactness given to the Review and Periscope Departments by the division of labour. Besides the Editors, a number of Gentlemen, chiefly in Edinburgh, engaged in the several walks of the Profession, make it their constant exertion, each in his own province, to obtain from New Medical Works and Periodical Publications the materials proper to afford an exact Survey of the progress of Scientific and Practical Medicine.

Messrs O. & B. respectfully submit the Contents of the Six Numbers of the First Volume and the first Two Numbers of the Second Volume.

Intending Subscribers will find it most convenient to order the Journal through their own Bookseller in the district in which they reside,—in England, from Messrs Simpkin, Marshall, & Co., London ;—in Scotland, from Oliver & Boyd, Edinburgh ; David Robertson, Glasgow ; Lewis Smith, Aberdeen ;—and in Ireland, from W. Curry, jun., & Co., Dublin.

CONTENTS OF MAY NUMBER.

JUNE NUMBER.

JULY NUMBER.

AUGUST NUMBER.

SEPTEMBER NUMBER.

PART I.—ORIGINAL ARTICLES.

On the Employment and Action of Digitalis in certain Diseases of the Heart. By WILLIAM HENDERSON, M.D., Professor of General Pathology in the University of Edinburgh.

A REMEDY so long and so habitually resorted to, and so much prized, in the treatment of diseases of the heart, as digitalis, may be supposed to have been so thoroughly studied, and to be so well understood, in all its therapeutic capabilities, as scarcely to afford occasion or ground for remarks having any pretension to novelty or importance; and yet, a glance at the opinions which are entertained of the manner in which its benefits are effected, and at the indiscriminate and almost universal recommendation of it in organic diseases of the heart, suffices to prove that something may still be added to the history of its operations, not unworthy of being known. Or perhaps the matter may be more correctly stated in a different way, so as that, while it may be granted that the effect which digitalis produces on the heart is thoroughly understood, it may be still questioned whether the manner in which different diseases of the heart are influenced by that effect has been duly considered or recognised,—a mode of putting the case which would make the proper title of this communication, " The action of different diseases of the heart under the influence of digitalis."

Passing by the alleged temporary acceleration of its contractions, the heart may be said, in general terms, to have the frequency of its motions lessened by digitalis. Such being the case, it will hardly surprise any one who is sufficiently acquainted with the very signal changes which some diseases of the organ pro-

duce on its construction as an hydraulic machine, that a frequency of its action, which may be advantageous in certain conditions of it, may be very much the contrary in others ; and yet the important inference which may thus be demonstrated by morbid anatomy is almost universally overlooked in practice. My attention to this circumstance was first suggested by Dr Corrigan's excellent paper, in the Edinburgh Medical and Surgical Journal, on Permanent Patency of the Aortic Valves. That judicious physician had noticed that the employment of digitalis was not so generally useful in that as in most of the other diseases of the heart, and my own subsequent experience and observation entirely concur with his. I do not mean to say that very notable advantage is not derived from digitalis in permanent patency of the aortic valves, but that beyond a certain degree its characteristic operation is so much less beneficial than in the other diseases of the heart in which digitalis may be employed, or is actually so injurious, that it becomes a highly important practical rule to abstain from the prolonged or repeated administration of it in the disease in question.

Patency of the aortic opening, at that period when the ventricles are being filled, necessarily admits of regurgitation from the aorta, the effects of which are an overloading of the left ventricle, and gradually an enlargement of it—an enlargement so great ultimately, if the patient survive long, as to exceed, often to a great degree, that which occurs under any other circumstances. The greatest enlargement of the heart I have seen, larger than any other on record, was the consequence of permanent patency of the aortic opening. All the chambers of the organ had become affected with excentric hypertrophy, and to so great a degree that the weight of the empty heart amounted to thirty-six ounces two drachms and a half,—above four times the average weight of the healthy heart. Such being the tendency and issue of that overloaded condition of the organ which results from regurgitation from the aorta, it will be granted that whatever increases the amount of the regurgitation must accelerate the progress of the enlargement. That the less frequently the heart beats, the greater will be the opportunity for this regurgitation, is sufficiently obvious ; and hence it is that the prolonged employment of digitalis cannot but be injurious when the aortic valves are not competent for their office. To the consideration of other expedients, common in the ordinary treatment of organic diseases of the heart, yet unequivocally

improper in this, I may advert on a future occasion, and shall content myself at present, in reference to what has just been stated, with saying that, if true to the extent to which I believe it to be true, its importance is very much enhanced by the facts that permanent patency of the aortic valves is one of the most common of the valvular diseases of the heart, and is perhaps the most easily distinguished during life.

What *a priori* discernment and practical observation concur in showing to be disadvantageous in the disease which has been specified, is capable of being proved by the same means to be eminently useful in some other diseases of the heart, and in none more than in those of the left auriculo-ventricular opening. To these I confine my further remarks for the present.

Diseases of this opening, although of several kinds, produce but two sorts of effects on the circulation;—either, by merely narrowing it, hindering the transmission of blood from the left auricle into the ventricle, or, by rendering the leaves of the mitral valve insufficient to close it, while the ventricle is contracting, admitting of a regurgitation of blood into the auricle. When either of these occurrences amounts to a considerable degree, and is of long continuance, hypertrophy of the right ventricle supervenes, and then it is that the sufferings from dyspnœa are developed, and that dropsical effusions are apt to take place. The circulation through the heart is materially impeded, and the lungs,—partly from this cause, and partly from the augmented power of the right ventricle,—placed as it were between two fires, become overloaded with blood, and distressed with the sense of suffocation. And not only so, but the whole venous circulation becomes retarded, and congestions occur in distant viscera. Superadded to the mere mechanical imperfections which result from the diseases of the opening, and the hypertrophy of the right ventricle, an increased frequency of the actions of the heart very commonly attends, either as a permanent occurrence, or as an occasional event dependent on bronchitic attacks, and, usually, in proportion to this frequency are the distress from dyspnœa and the amount of the dropsy. Those who are familiar with valvular diseases of the heart must have remarked that a very moderate amount of bronchitis is enough to excite much suffering from what is called difficulty of breathing, but it is certainly not usual to find this ascribed to its true cause. Impeded transmission of air into the cells of the lungs is commonly considered the source of the evil, though the

dyspnœa is often very great without there being any stethoscopic evidence of such impediment ; and, that I am right in ascribing it rather to the increased frequency of the actions of the heart, appears from the facts that mere muscular exertion, by increasing that frequency, suffices to produce or to aggravate the dyspnœa, and that a diminution of that frequency through the instrumentality of digitalis suffices to lessen or to remove it. The reason why an acceleration of the pulses of the heart excites or increases dyspnœa and dropsy in the diseases of the left auriculo-ventricular opening is twofold. In the first place, it does so on account of the hypertrophic condition of the right ventricle, and, in the second, on account of certain occurrences at the diseased opening. Thus, when there is narrowing only of that opening, the more frequent closings of the valve cause a more frequent interruption to the onward motion of the blood ; and, when there is a patent state of the opening, a more frequent regurgitation, and a greater amount of it in proportion to the quantity of blood which has had an opportunity of passing into the ventricle. Such being the natural effects of an increase in the frequency of the actions of the heart, it is easy to understand how a diminished frequency operates in relieving the disorders which attend on the diseases which have been referred to. This operation is useful in several ways ; it moderates the force with which the blood is propelled into the lungs, and, by the lengthened interval between the contractions of the heart, it allows of the left ventricle being more fully distended in the case of the narrowed opening, while it lessens the frequency of the interruptions to the passage of the blood, and, in the case of patency of the opening, prevents the regurgitation from being so often repeated. That these latter circumstances are not visionary, but real and efficient, is manifested by the great change which is witnessed in the size and force of the pulse at the wrist when the digitalis has produced its full effect on the actions of the heart. From being very small and feeble before the digitalis has been administered, the pulse becomes full and firm when the medicine has reduced the number of the contractions of the heart to 40 or 50 in the minute. Coincident with this change, other important improvements occur. The respiration becomes freer and easier, the amount of urine increases, and the dropsy begins to disappear ; improvements which are due to the bettered circulation through the heart, and the consequent diminution of those mechanical congestions which had embarrassed the lungs, and hindered the

action of the kidneys. In illustration of these views I subjoin
two cases, the one of narrowing of the left auriculo-ventricular
orifice, the other of regurgitation through it, and both with
hypertrophy of the right ventricle. It will be seen that in
each, as the heart beat more slowly, the amount of the urine
increased, and the dyspnœa and dropsy diminished. At first, for
a few days, in one case, squill and bitartrate of potash were con-
joined with the digitalis for the purpose of securing a diuretic
effect with more certainty ; they were speedily omitted, in order
to show the pupils of the hospital the action of digitalis alone.
I took the opportunity of stating, that I did not conceive the
digitalis to act as a diuretic, in the common sense of the term, by
augmenting directly the functional activity of the kidneys, but
indirectly in consequence of its lessening or removing the venous
congestion of these organs, in common with that of other viscera,
in the way I have described. At the same time it was stated,
that digitalis has been conceived to have the power of increasing
the secretion of urine by a more direct influence, perhaps a
stimulation of the kidneys, since it has appeared to augment the
quantity of urine sometimes in healthy persons, and has been
known to produce a similar effect on other secretions, occasionally
to a very considerable degree,—on the saliva for example. But
that in the cases in question the medicine could not be supposed
to have acted in this way, but in that which I have detailed
above, appeared to be proved by the continuance of the copious
secretion of urine so long as the effect of the digitalis continued
to be exerted on the heart, many days after the drug had been
omitted ; and by the decrease in the amount of urine which
occurred when the action of the heart rose to its previous
frequency.

Case 1.—Narrowing of the Left Auriculo-ventricular Opening.

Mary M'Donald, a widow, aged 60 years. She was admitted
into the Infirmary on the 19th of February last, and fell under
my care on the 29th of that month. It had been ascertained
that twelve years before her admission she had been affected
with severe pain in the chest, for which she was bled and blis-
tered, and that since that time she had enjoyed on the whole
good health until about six weeks before her admission, when, as
she thought in consequence of exposure to cold, she became af-
fected with dyspnœa and cough. She had been previously sensible
of occasional palpitations of the heart, and about the time at
which she began to suffer,—but whether after the dyspnœa came

on or not was not ascertained,—she became affected with general dropsy.

The report of the 29th of February is as follows :—The sternum is prominent, the corresponding cartilages of the ribs not so. The percussion-sound is pretty good in front, beginning to be dull in connexion with the heart between the third and fourth left cartilages, and laterally on the right side of the lower third of the sternum, from which the dulness extends two inches to the left of the bone. The respiratory murmur is superseded a little by mucous rattle on the right front. The percussion-sound is dull on the left back inferiorly, nearly from the lower angle of the scapula, but is moderately good on the right. The respiratory murmur is absent over the dull space on the left. Pulse at the wrist very feeble and irregular ; in the region of the heart not particularly strong. At the wrist the pulsations amounted to 56 in the minute, and in the region of the heart to 72. She has much dyspnœa ; respirations 26. The report on the 1st of March is to this effect :—Urine amounts to ten ounces, is loaded with red sediment, and has a density of 1023. Pulse in the region of the heart is 104, at the wrist 58. It is very feeble and small, but pretty regular, in the latter situation. Sounds of the heart are free from murmur. Impulse moderate. On the 2d she was ordered ten leeches to the sternum, and powders containing each two-thirds of a grain of digitalis, two grains of squill, and ten of bitartrate of potassa, of which one was to be taken every six hours. She had also a draught for the night, containing some muriate of morphia and sulphuric ether. She had at this time considerable œdema of the lower limbs, and a good deal of effusion into the left pleura.

March 4. The urine began to increase on the 2d, and in the course of the last twenty-four hours has amounted to thirty-six ounces. Breathing easier. Œdema nearly gone.

March 5. About seventy ounces of urine. Breathing much improved. State of left side much as before. Pulse improved in size and strength,—at the wrist 56, at the heart 90. All but the digitalis to be omitted, of which a grain thrice a-day.

March 7. Urine 120 ounces. Pulses in the region of the heart 80, a strong followed quickly by a feeble one ; at the wrist 56, of fair strength and size, and not very irregular.

On the 11th, the pulse was 40 at the wrist, full and firm ; and continued from 40 to 42, full and firm, and the urine usually from 30 to 90 ounces, till the 19th, though the digitalis

was omitted on the 12th. The pulse began to rise in frequency after the 20th, and on the 1st of April was at 84, the urine amounting to thirty ounces. On the 2d of April, the pulse was 90,—fluctuation and swelling had occurred in the abdomen, and œdema in the lower limbs, and the breathing had become again very difficult,—though the effusion into the left pleura, which had disappeared, had not recurred,—and the urine had become reduced to fifteen ounces. Two grains of nitre and one and a half of squill were prescribed four times a-day, and on the two following days the urine amounted to twenty-four and twenty-six ounces. Digitalis in doses of a grain thrice a-day was substituted on the 4th; and on the 7th the urine amounted to 64 ounces, while the pulse ranged between 80 and 92; and on the 10th to 100 ounces, the pulse being 50, of good size and strength. On the 11th of April, the pulse was 48, the urine 104 ounces. The influence of the digitalis on the heart appeared to decline afterwards; and on the 15th the pulse at the wrist was 60, small and irregular, in the region of the heart 80, and the urine amounted to but 24 ounces. She desired to be dismissed at this date.

Case 2.—Regurgitation through the left auriculo-ventricular orifice, and hypertrophy of the right ventricle.

Mrs Blakie, aged 27; admitted into the Infirmary, March 5, 1844. Eight or ten years ago she was very subject to rheumatism, which affected chiefly the lower extremities, but the lesser joints in upper extremities also occasionally. About eighteen months ago she was confined with her first child, the labour was tedious, and required the aid of instruments for its completion. About a fortnight after delivery she had a severe inflammatory affection within the chest, shortly after her recovery from which she was sensible for the first time of palpitations in the region of the heart, greatly aggravated on exertion, and accompanied by a good deal of dyspnœa, and sense of constriction across the chest. Since that time her sufferings have been gradually increasing.

Exertion of any kind, especially that of ascending an eminence, increases her dyspnœa so much as to oblige her to stand still, and produces palpitation of the heart. Her pulse is 90 at the wrist, very small and feeble. The exact extent of dulness in the region of the heart cannot be ascertained, owing to the fulness of the mammæ. It begins, however, fully half an inch to the right of the lower half of the sternum, ascends as

high as the third rib on the left side, and extends to the left beyond its natural limits. There is a strong impulse over all this surface, and also in the epigastrium; and also a strong bellows murmur chiefly in the region of the left ventricle. The second sound of the heart at the lower extremity of the sternum, on the right side of the epigastrium, and also between the second and third left cartilages, is preternaturally clear and loud. Both external jugular veins are very turgid, and have a slight single impulse, synchronous with the contraction of the ventricles. She has had some swelling of the face, lower extremities, and abdomen, for the last three weeks. There is a purplish tinge of the countenance; urine said to be between two and three pounds, but has not been kept; density 1022; distinctly coagulable by heat and nitric acid. A good deal of mucous rattle at the lower part of right lung, where the percussion-sound is not very satisfactory. She is ordered to have two-thirds of a grain of digitalis thrice a-day. On the 10th, the pulse was 80, and fuller; the urine 40 ounces; the breathing easier; and the œdema considerably less. On the 11th, the urine was 68 ounces, of density 1015, and less coagulable; the pulse 72, and of fair size and strength,—all the dropsical symptoms diminished. On the 12th, urine 48 ounces, pulse 72, of good size and strength. Nausea having occurred, the digitalis was omitted, and she had some squill powder given her for two days. On the 13th, the pulse continued of good size, not exceeding 80,—the respirations were easy, and the urine amounted to 58 ounces. She was dismissed in about a week after, having experienced great relief since her admission. Latterly her complaints were returning, but family circumstances prevented her remaining longer.

Illustrations of Congenite Syphilis. By WILLIAM CAMPBELL, M.D., Consulting Physician-Accoucheur to the Edinburgh Maternity Hospital, and Lecturer on Midwifery, &c.

THOUGH not a few opportunities occur to those toiling in the same vineyard with myself, to satisfy them that a father, whose system is contaminated with syphilis, from this complaint having been imperfectly eradicated, may so infect his offspring that it shall die *in utero,* or if born alive, exhibit evidences of disease

at or some time after birth ; yet as this opinion is called in question in a recent work of reputation,* I am induced to record the following illustrations and remarks in support of a belief which appears to me to have been long and well established. In 1823, I was requested to attend, in her second confinement, Mrs C., the lady of one of my brethren, then six months advanced in her pregnancy ; and in a few weeks thereafter she was delivered of a male child, which lived only eight hours. It presented no morbid appearance, nor was its development less than that of other fœtuses whose residence *in utero* was of similar duration. No cause was assigned for the premature labour ; and I was now informed that in her previous confinement the birth was also premature, and that the infant survived only a few hours. In the summer of 1824, I again attended this lady, when labour supervened in the seventh month ; but on this occasion the fœtus was dead ; and from the extent of decomposition, and the information derived from the parent, life must have been extinct for more than ten days.

After these repeated misfortunes I resolved on an inquiry, from which, owing to its delicate nature and the respectability of the party, I had hitherto been deterred. The gentleman was a young physician, and I ascertained that about six months previous to his marriage with a young and amiable lady, he contracted what appeared to himself and another junior member of the profession, a chancre. After employing the usual means, and considering the disease removed, he married. At the period of this investigation there was not in either parent the least evidence of syphilis in any form,—nay, both the individuals enjoyed perfect health. In the foregoing case the gentleman was salivated ; the lady also, as a matter of precaution, took a grain of calomel daily, for eleven days, when the gums became affected to a much greater extent than was intended. When the uterus was restored to its unimpregnated condition, this lady again conceived, advanced to the usual term of gestation without any tendency to premature uterine action, and was delivered of a vigorous male infant, free from any syphilitic taint. There was no more issue, for the father died within a year from this birth.

I shall add but one more illustration, for such cases are so familiar to those of our brethren who devote their attention to obstetric practice, that it would be superfluous to multiply them.

---

* Acton, Complete Practical Treatise on Venereal Diseases, p. 404.

In the autumn of 1843, I was consulted by a lady from the country, ten weeks advanced in her fourth pregnancy. Her first infant was born in the early part of the eighth month of gestation, was delicate, and lived eleven days. The delivery was attended by a profuse discharge of liquor amnii. Her second birth happened in the seventh month, the infant surviving only an hour and a half; and her third delivery happened in the sixth month, when a fœtus much decomposed was produced. After careful inquiry, I satisfied myself that the lady never had any syphilitic symptoms. Before I could decide on a suitable plan of treatment, I requested an interview with the husband, from whom I learned that about 23 years previously, and 17 years before marriage, he had syphilis repeatedly; and though assured to the contrary, his impression always was that the disease had not been completely removed. These parties were apparently in perfect health. I determined on exhibiting mercury to the gentleman, and he was accordingly twice mildly salivated. But I hesitated at first to order this medicine for the lady, lest the uterus might be excited, and the ovum thrown off. Proceeding, however, upon the belief, from what happened in her three former gestations, that the fœtus would be destroyed unless mercury were exhibited, and that there was a chance the medicine, under prudent management, might not occasion premature expulsion, I determined to salivate the lady also. She was twice salivated, after which she enjoyed excellent health; and until the seventh month she advanced in her pregnancy without even a tendency to premature uterine action. From this date, however, there were frequent threatenings of premature expulsion, which repeatedly required the abstraction of blood, and doses of from 80 to 100 drops sol. mur. morph. to allay them. At the close of the eighth month labour supervened, when a living, healthy, small female fœtus was produced.

I have also met with repeated instances where, after minute inquiry, and acknowledged contamination on the part of the female parent, I have been satisfied that she alone was to blame for a series of misfortunes such as have now been related. In several of these instances, the mothers, after positively denying ever having had syphilis, afterwards paid me confidential visits, to inform me as a profound secret, that they had had this disease before marriage. These individuals, likewise, after the administration of mercury, had a living progeny.

In the present age, when it is fashionable with some of our

brethren, in their morbid avidity to acquire a character for originality, to deny even the evidence of their own senses, we have been told that the production of a living healthy progeny, in such cases as those now referred to, is to be ascribed, not to the eradication of syphilis, but to the induction of some other change in the system. All that need be said, however, in reply to this objection is, that such facts as the foregoing, since they must have been observed by every practitioner extensively engaged in this department of the profession, are of too stubborn a nature to be set aside by reasoning or sophistry. From the Graafian vesicle being a part of the female parent, and the ovulum after fecundation being dependent for its development on the fluids derived from her system, it will readily be admitted that the progeny will be healthy or diseased according to the condition of the materials furnished for its support. But we cannot so easily comprehend the transmission of syphilis from the male parent to the product of conception. But although we can no more explain this point than we can the transmission of mental peculiarities, similitude of features, gout, scrofula, phthisis, cancer, and supernumerary fingers and toes, yet it would be absurd to call its reality in question, when such glaring and numerous facts are so frequently brought under our notice.

Dr Acton is also sceptical as to the influence of syphilis in destroying the fœtus or producing abortion ; and in support of his belief he refers to information derived from prostitutes, who were inmates of the Parisian Venereal Hospital during his attendance at this institution. Though ready to do justice to every man's honest opinion, I would say that information from the source referred to is, to say the least, questionable ; *secondly*, that the field for observation was far too limited, considering that on an average not more than six prostitutes in one thousand conceived in the course of one year, according to the investigations of Duchatelet ;* and, *thirdly*, that opinions based on such data cannot be put in competition with the experience of men who have been half a century or more engaged in practice. That in occasional instances a fœtus much contaminated with syphilis will be retained to the full period of utero-gestation, and even appear plump and healthy for days or indeed weeks after birth, must

---

* " En résumant toutes ces reponses qui m'ont été faites, et ce que j'ai trouvé dans quelques livres anciens et modernes, j'ai du tirer cette conclusion, que mille prostituées fournissent à peine six accouchemens dans le courant d'une année." Tome i. p. 230.

have been noticed by all obstetric practitioners of experience; but such cases only constitute the exceptions to the general rule. This circumstance, though undeniable, we cannot explain; nor yet why abortion should generally happen when the fœtus is sickly or has been destroyed by syphilis. All we know is, that when the development of the fœtus is interrupted, or its life becomes extinct, it is a law in the economy of the reproductive system of the female for the uterus to be sooner or later excited to rid itself of its contents.

In some instances there is reason to believe that the virus is increasing in activity, from the circumstance of the first fœtus produced not only being born alive, though premature, but continuing to live for some time, while several succeeding productions are not only stillborn and decomposed, but have been expelled at an earlier period of gestation. In other cases again, as all these circumstances are reversed, the disease would appear to be exhausting itself. The following case would seem to prove that in a twin pregnancy, the virus sometimes progresses very differently in each fœtus, though both are exposed to the same source of contamination. In the summer of 1823, a pupil of my class delivered a woman in Rose Street of twin males at the full time. The first was dead and much decomposed, while the second was living, plump, and apparently healthy. We were unable to account for this remarkable difference for some weeks, when the secret was revealed by the living infant exhibiting unequivocal evidences of syphilis; and shortly thereafter the female parent also became affected with secondary symptoms.

I have seen several instances in which a diseased infant contaminated a perfectly healthy nurse. In one of these cases where there were ulcers on the child's mouth, the breasts and thereafter the whole system of the nurse were affected, and that in so short a period of time as to be scarcely credible. On a Sunday forenoon this individual received to nurse a twin infant born of a parent who had been contaminated by her husband, but in whom the complaint was thought to have been completely removed by the use of the hydriodate of potass; and although, from the disease having appeared in the child, it was returned to its mother on the Thursday following, the nurse was nevertheless contaminated; the mammæ became affected with copper-coloured blotches, and the nipples surrounded by chops and small ulcers.

In infants, at birth, syphilis shows itself under various forms.

Some, as may be gleaned from the foregoing observations, are well developed, apparently healthy, and continue so for some days or even weeks, when the pelvic limbs suddenly become indistinctly marbled, and if the mischief, as is very apt to happen, be not recognised, the child may be carried off after a few days in convulsions, without exhibiting any other evidence of syphilis. These are most insidious cases, from the indistinct evidences of contamination, and from our not probably recognising their nature until after an investigation subsequent to the infant having been cut off. In a second case the infant is imperfectly developed, presents the appearance of old age in miniature, a sallow emaciated aspect, numerous large pustules scattered over the surface, ulcers on the lips and angles of the mouth, and hoarseness of the voice. The pustules may be flat or prominent, suppurate quickly, desiccate without bursting, and are soon converted into dark crusts. Unless this variety be actively and promptly attended to, the little patient is very apt to perish. A third form in which syphilis shows itself in infants at or soon after birth, and which, as far as my observation enables me to speak, is the most frequent, is by the genitals being pervaded by an extensive excoriation, which attracts little attention until scaly copper-coloured blotches are seen on the nates and soles of the feet, whence they extend to other points of the pelvic extremities, as also to the groins and umbilicus. A great part of the surface is at last pervaded by copper or livid coloured blotches; which, on the face and neck are dry, and covered by mealy exfoliations; while on every other region of the body they are humid. On the head the hair appears like down, though on other parts of the body it be natural. At length the external mucous tissues become affected, as the lining of the eyelids, nose, and mouth, and of the vagina in female children. An ichorous discharge may flow from the nostrils in both sexes, and from the vagina in the female; and in one instance I have seen this happen also in a premature male infant, whose mother died from syphilis in less than a fortnight after delivery.

Cases attended with pustules at birth, much affection of the mouth, and a considerable degree of hoarseness, require a very guarded prognosis.

It is scarcely necessary to recommend that those children should be reared by their parents, to prevent secrets of so delicate a nature being disclosed, and the disease being communicated to a hired nurse, who might afterwards institute proceedings

in a court of law for the recovery of damages. I must express my decided disapprobation of all attempts to rear such infants artificially, since they are generally so delicate that they are almost certain of being lost under such management. And for the removal of syphilis, I must say that, however suitable the water-gruel system may be found in adult subjects, it would be most reprehensible to rely on it for the extinction of the virus in mere infants, or even in older children. There are various preparations of mercury which may be used with safety and effect; but I have almost invariably preferred calomel. By some of our brethren we are advised to limit the exhibition of mercury to the nurse; but I am not aware that there are any good grounds for this preference, neither am I prepared to say from observation that it can be relied on. As, however, when this agent is judiciously administered, it is perfectly safe, and as it must be more satisfactory to subject the child also to its influence, I have invariably acted on this principle.

The blue mass, hydrargyrum cum creta, and mercurial inunctions *to the soles of the feet,* are all safe. I commence with doses of a quarter of a grain of calomel, and two grains of creta præparata, once daily for the first ten days; and thereafter the quantity of calomel is progressively increased to a quarter of a grain twice each day. The disease disappears rapidly under the influence of this medicine; but nevertheless it is most difficult effectually to eradicate the virus; wherefore, I have made it a rule invariably to continue the medicine for three weeks after every vestige of discoloration has vanished. I have seen ptyalism only once in a child in consequence of the use of mercury. When the nurse feels the child's mouth unusually warm, the medicine should be discontinued for a few days, lest convulsions might arise from irritation; a little mild laxative should be ordered; and during congenial weather, the little patient should be taken into the open air. Should the calomel excite diarrhœa, the medicine must be left off, and a dose of the tincture of hyoscyamus, with warm bath, ordered at bedtime. I have no faith in the exhibition of iodine in such cases; for in every instance in which I have known this medicine employed, the disease returned.

EDINBURGH, 4 PICARDY PLACE, *April* 1844.

Case of Fatal Hemorrhage from Perforation of the Aorta by False Teeth impacted in the Œsophagus. By JAMES DUNCAN, M.D., Fellow of the Royal College of Surgeons, L. and E., one of the Surgeons to the Royal Infirmary, Edinburgh.

—— CALDER, æt. 22, Edinburgh, March 9, 1844, had lost his two superior anterior incisors when a boy by an injury received when playing at ball. Being a dentist's workman, he had, to conceal the loss, made at his spare hours artificial substitutes which he had worn for the last three months. These were intended to be removed at night, and in consequence of this, as well as to prevent them from being seen, he had made the gold plates, by means of which they were attached to the adjoining teeth, as little projecting as possible, compatible with the retaining them in position. The consequence was, that their grasp of the adjacent teeth was but slight, and they could be displaced with ease. His master had repeatedly warned him of the danger attending the wearing them during sleep, and recommended him always to remove them. He had, however, neglected this precaution, and on the 28th February last, he had gone to rest with them as usual. In the morning the teeth were amissing; and after a fruitless search for them amongst the bed-clothes, he became convinced that he must have swallowed them. He was further confirmed in this opinion by the difficulty in swallowing which he experienced, and by the sharp pain which he suffered when the attempt was made. He was naturally much alarmed by the accident, and in consequence applied to Mr Syme for assistance. Mr S. passed a probang, and detected a foreign body in the œsophagus, considerably below the cricoid cartilage, and much beyond the reach of the ordinary forceps used for extracting foreign bodies from the gullet.

Mr S. now recommended his removal to the hospital, and when there introduced a probang with threads passed through the bulb, the other ends being retained in the hand, trusting that if the bulb could be carried beyond the foreign body, it might be entangled by them, and thus removed. Nothing, however, was detected, and it was believed that it had found its way into the stomach,—an opinion which was rendered the more probable by the fact, that the difficult deglutition was by no means so great as previously. So considerable indeed was the relief, that the young man requested permission to leave the hospital the same

evening. It was thought unsafe to comply with this request, and he remained in hospital nine days, still suffering from the fixed pain already alluded to, and occasionally spitting small quantities of blood, but without complaining of much difficulty in deglutition. The pain was consequently regarded as merely the effect of some injury inflicted by the foreign body during its passage downwards, and it was thought unadvisable to make any farther examination during that period. From some cause or other he left the hospital on the evening of the 9th day, and returned to his own home.

Next morning, the 9th of March, I received a hurried call from his mother, who had been much alarmed by an occurrence which had taken place shortly before I had been sent for. She stated that her son had risen from bed, and that in crossing the room towards the window, he had become suddenly faint and giddy, and had vomited a mouthful of blood. He was immediately removed to bed, and complained of a feeling of great weakness. I called upon him as soon as possible, and found that during the absence of his mother he had slept a little, but still complained of great debility, and of some slight difficulty in breathing. His face was pale, and the skin rather cold, but the pulse was of moderately good strength. From his description of what had taken place, I was led to believe that the foreign body had been dislodged from its situation, and that it was possibly within reach of the forceps, with which I had provided myself. I accordingly requested him to sit up by the side of his bed, to enable me to make the necessary examination. This he did with ease, and without much assistance, expressing great anxiety to have something done to relieve him. The act of depressing the tongue, to enable me to introduce the forceps, produced vomiting, and a mouthful of dark fetid blood was discharged. This was immediately followed by another but much larger quantity of fluid of the same description, perhaps about eight or ten ounces, and the false teeth were heard to rattle against the vessel into which it was received. The patient was immediately aware of this, and his friends were overjoyed at what had taken place. Another mouthful of the same fluid was then ejected; an interval of a few seconds elapsed, and then a mouthful of bright arterial blood was discharged; a second, and a third followed, the lips became livid, the pulse at the wrist ceased, the patient gave one or two convulsive sobs, and expired.

An inspection of the body was readily obtained from the

friends. It was evident from what had taken place, that some artery of large size had been perforated, but it was of course impossible to say, previously to the dissection, what vessel had been injured. The following were the appearances met with at the post-mortem examination :—The pharynx, the œsophagus, and stomach, along with the carotids, subclavians, and arch of the aorta, were removed entire, a ligature having been previously thrown around the duodenum to prevent the escape of the blood which had accumulated in the stomach, and so enable us to form an estimate of the quantity which had been lost. The œsophagus, stomach, and duodenum were found distended with pretty bright arterial blood. The quantity could not be measured; but in the opinion of those present at the examination, Professor Henderson, Mr Shand, Mr Reid, and myself, there could not be less than eight or ten pounds. The pharynx and œsophagus were laid open by an incision posteriorly, carried as low as the cardiac orifice of the stomach. About $4\frac{1}{2}$ inches from the rima glottidis there was an ulcerated perforation of the anterior part of the œsophagus, of about $\frac{3}{4}$ths of an inch in length and three lines in breadth, passing obliquely upwards from the right to the left side. The edges of the perforation were rounded, and there was considerable surrounding injection of the mucous membrane. By this opening the probe could be readily passed into the aorta; but the latter vessel was not laid open at the time, it being thought better to immerse it for a day or two in spirits before doing so. On laying open the aorta subsequently, a perforation of about the size of a large crowquill was found about half an inch below the origin of the left subclavian artery. The opening was irregular in form, the edges everted, and at the lower part there was a pretty firm adherent coagulum. There was little or no vascular injection around this opening. The artery was otherwise perfectly healthy.

I have annexed a sketch of the false teeth, along with another showing the point at which the aorta was wounded. The gold plate to which the teeth were attached was pretty large, adapted to the shape of the palate immediately behind the incisor canine and bicuspid teeth on either side, with projections corresponding to the spaces between these teeth. The two last of these projections on both sides were large and pointed, with almost a cutting edge. The space between the two terminal projections measured one inch and $\frac{3}{8}$ths, and the breadth of the plate behind the incisors measured fully $\frac{3}{8}$ths of an inch. One could scarcely

conceive a more dangerous weapon, or one more likely to be followed by fatal consequences, than that I have just described, when lodged in the situation in which this one must have remained from the time of the accident, in order to have produced the extent of ulceration met with on dissection. Its form readily explains how it could not be felt, on the second introduction of the probang, and offered no resistance to the passage of the instrument downwards. From the curve which it describes, and from the stretching of the œsophagus between its two terminal points, ample space must have been left for the passing of the instrument; and from the manner in which it must have got impacted after the first passing of the probang, it would present superiorly an edge not much exceeding in thickness that of an ordinary sheet of writing-paper, so that the bulb would readily glide over it without any resistance being met with.

In every point of view the case was an exceedingly alarming one. If the teeth were allowed to remain in the œsophagus, they could scarcely fail to induce fatal consequences; and if they passed into the stomach, the result would in all probability have been the same, although very dangerous bodies are recorded as having passed the whole length of the intestinal canal without injury. Even had they been within reach of the forceps and grasped by them, or had they been entangled by the threads attached to the probang, their removal must have been attended with very great danger, and might have proved instantaneously fatal from the laceration of the important parts in the vicinity. This case also affords an instructive example of one of the many modes in which foreign bodies lodged in the œsophagus may prove fatal, and inculcates the necessity of removing them as early as possible when their removal can be effected.

Foreign bodies lodged in the œsophagus may lead to fatal consequences in a variety of ways. When large, the first danger to be dreaded is that of suffocation : this may take place instantaneously before assistance can be afforded, and many cases are recorded in which death has been produced in this manner. Should the foreign body not be so large as to induce asphyxia, but remain impacted in the œsophagus, various other results may follow. Inflammation of the surrounding parts, leading to suppuration, may supervene, and the foreign body thus being set free, may either descend into the stomach, or may be rejected by the mouth along with the purulent matter. Extensive suppuration of the surrounding soft parts may on the other hand take place, and may, as has

not unfrequently occurred, lead to fatal consequences.   Numerous cases of this description are recorded, amongst others one by Hofer, in which an abscess formed, and gave way into the chest, death being the consequence.

Sir G. Ballingall has kindly communicated to me the case of a soldier under his care in India, in which death followed pretty extensive gangrene of the surrounding parts.   The man, on one of the anniversaries of the king's birthday, when in a state of intoxication, was eating his curry hurriedly, and in doing so swallowed a portion of bone.   The probang was passed, but nothing could be detected.   He remained in the hospital for ten days, and then left it, but returned some time afterwards and died.   On dissection, the bone was found impacted in the gullet, and the surrounding soft parts were in a state of gangrene.

In some few cases, the foreign body, after inducing suppuration of the soft parts in the neck, has escaped externally on the spontaneous giving way of the abscess, or has been removed by incision.   One or two are recorded, in which the trachea has been perforated by ulceration, and in this manner also the accident may lead to a fatal result.   In some few instances the foreign body has formed a pouch for itself, and has remained there for years, and afterwards been ejected by vomiting.   One or two cases are related in which the foreign body had been expelled after the lapse of fourteen or sixteen years.

Death by hemorrhage, as in the case I have related, is not so rare as I was led to believe, before consulting the literature of the subject.   Many cases in which this has occurred are met with in different works, the hemorrhage having followed perforation by ulceration of the different large vessels in the vicinity at periods more or less distant from the date of the accident.   In the Dictionnaire de Medecine, 1840, three cases are referred to as having terminated in a similar manner to the one I have related; one by Martin, in the case of a soldier who had been in the habit of swallowing pieces of money for wagers : these he generally passed by stool, but at last he suffered from his folly. Fifteen days after one of his exploits, he perished from vomiting of blood; and on examination, the coin, which had not been passed, was found to have penetrated the aorta, nearly at the same point as in the case I have recorded.—The two other cases, the particulars of which I have not been able to obtain, are related by Wagret, and Saucerotte.—The carotid has been wounded in several instances.   One is referred to in

the same work as recorded by Dumoustier : I append another as related by M. Begin, Surgeon Major at the Val-de-Grace. " A soldier, while eating his soup, swallowed a piece of bone, which stuck in the œsophagus. Attempts to push it on towards the stomach were made, and seemed to be successful. Soft and liquid food could now be taken without difficulty, and a probang, upon being introduced, readily reached the stomach. The patient seemed to labour under no further inconvenience. He left the hospital, but in the course of a month he returned again, complaining of a sharp pain in the left side of the neck. By the employment of antiphlogistics his ailment was removed, and he left the hospital once more. The pain, however, which never entirely left him, except for short intervals, became again severe ; the patient returned for the third time to the hospital, not, indeed, for the particular accident in question, but for a gonorrhœa which he had contracted. Every thing seemed to be going on well, when he suddenly threw up large quantities of · blood, perhaps to the amount of seven pounds. The hemorrhage presently ceased, but the next day it returned, and proved fatal. On examining the body, there were found in the œsophagus, about its upper third part, two parallel ulcerations ; that on the right side nine lines in breadth, and that on the left twelve. Opposite the latter there was an adhesion between the œsophagus and the corresponding part of the carotid. In this vessel, moreover, erosion had produced a small opening, about a line in diameter, which proved to be the source of the hemorrhage."

Guthrie relates a case, in his work on the arteries, in which both carotids were wounded from swallowing pins, a soldier having done so in order to get his drill-sergeant into a scrape. Another is related by Mr Bell of Barrhead, in the Medical Gazette, February 10, 1843, in which the right carotid was perforated by a needle, which had been accidentally swallowed. The pulmonary artery has been wounded, in one case communicated by M. Bernast of the Toulon Hospital to M. Begin. " A young soldier thought he felt, while eating soup, that he had swallowed a sharp bone, or a pin ; consequent to which he experienced a pungent, lancinating, and occasionally insupportable pain. On entering the hospital, he was treated with antiphlogistics, but without success ; the pain increased, and kept the unfortunate patient in restless misery. Nausea at length supervened, and he threw up some ounces of blood. Eventually he was seized with convulsions, and he died on the eighth

DR DUNCAN'S CASE OF PERFORATION OF THE AORTA.

day. On opening the body, a large quantity of blood was found in the chest, especially in the right side. The heart and aorta were sound; but on turning aside the pulmonary artery, there was found in front of the œsophagus a flattened, sharp-pointed bone, indented on one of its edges, and resembling one of the bones of the nose. This had produced an opening in the œsophagus, and a corresponding, though very minute one, in the pulmonary artery, at the spot where this vessel divides in order to be distributed to the lungs. The point of the bone was seen in actual contact with the lesion."—*From the London Med. Gazette,* 11th *May* 1833, p. 175.

The right subclavian has also been wounded in one case, as related by Mr Kirby in the Dublin Hospital Reports, vol. ii.— In this case the right subclavian rose from the left side of the arch of the aorta and passed to the right behind the œsophagus. It is possible that many other cases may be on record, but I have not happened to meet with them.

I have said, that even had the foreign body in this case passed into the stomach, death might, and in all probability would, have been the consequence.—I might refer to many instances confirmative of this, in which the patients have perished from hemorrhage, or from obstruction or perforation of the intestines, but I do not consider it necessary to allude further to these at present.

In the accompanying plate, *a* indicates the situation of the perforation ; *b* par vagum ; *c* arteria innominata ; *e* left carotid ; *g* left subclavian ; *m* a representation on a somewhat diminished scale of the false teeth.

Case of Imperforate Hymen.   By A. WEBSTER, M.D., Physician to the Dundee Royal Infirmary, &c.

ON the 8th of September 1843, M. C., mill-worker, aged 20 years and 11 months, consulted me regarding a small and hard tumour situated a little below the umbilicus. On inquiry I learned that this tumour had only recently attracted attention, and that it did not cause much uneasiness, although it was painful to the touch. The girl was plump and of a healthy appearance, and the mammæ were well developed ; the abdomen was rather prominent, and she had never menstruated. For upwards of

two years, however, she had been subject to periodical attacks of pain about the loins, which generally lasted for days, and were accompanied by a sense of weight and bearing down in the pelvic region; and latterly to these symptoms there had been added difficult micturition and constipation; the bowels being with difficulty acted upon even by strong purgatives. On examination of the external organs of generation they appeared normal and fully developed, but, within the labia, there existed a strong membrane which completely shut up the entrance to the vagina; this membrane was vascular and bulged outwards, as do the membranes in child-birth, when they first begin to separate the labia. On pressing against it, the feeling communicated to the finger was that of a bag containing fluid. Having thus satisfied myself that the case was one of imperforate hymen, I next day, in presence of Mr Ross, house-surgeon to the Dundee Royal Infirmary, made an incision from the pubes to the fourchette of about an inch and a half in length, and gave vent to upwards of 8 lbs. of a thick brick-coloured fluid. This operation afforded great and immediate relief, while at the same time the abdomen became much diminished in size, and the hard tumour below the umbilicus entirely disappeared. I now passed my fore-finger into the vagina, which felt as large and relaxed as does that of a woman immediately after delivery of a child at the full period; the uterus, however, did not feel enlarged, as the os uteri was as small as in the virgin state. A roll of lint was introduced into the vagina to prevent union of the incised edges, which was withdrawn and re-inserted repeatedly for about a week, till the cure was complete. After this I lost sight of my patient, and as she had left her former lodgings, it was not without difficulty that I discovered her a few days ago. I then learned that about five weeks after the operation she menstruated freely, and that she had continued to do so regularly till within the last seven weeks; and this latter suspension she accounted for, by informing me that she had been three months a married woman, and now considered herself pregnant; her first sexual intercourse was not attended by pain or difficulty.

DUNDEE, 20th Feb. 1844.

Case of Congenital Ulceration and Gangrene. By T. B. W. POTTS, M.D., Edinr., M.R.C.S.E., &c.

IN July 1843 my professional assistance was requested by Mrs C., a young woman then about the seventh month of her third pregnancy, and apparently in the enjoyment of excellent health. On the 17th of August, I was summoned to attend her in her accouchement; every thing went on most favourably, and she was delivered of a male child after an easy labour of four hours. On examining the infant with a view to ascertain its true uterine age, I felt assured that it had not attained its full term by at least three or four weeks. I also observed something seriously wrong with its left foot. After having secured the cord and paid the necessary attentions to the mother, this member was more minutely examined, and a large ulcer was found on the front of the foot, extending from the inferior part of the tibia and fibula to the metatarsal bones ; the upper and lower portions of the sore were in a gangrenous state ; and the ulceration had proceeded so far that the lower ends of the tibia and fibula were exposed, as also some of the tarsal bones. A line of demarcation commenced to form on the second day after birth, just above the upper edge of the sore, but the child sunk on the sixth day. We are left in doubt as to the cause of this affection ; but the question appears to be, whether was it caused by disease—contamination of the system, or by injury, strangulation, or pressure by the cord. The mother admitted having contracted syphilis from her husband previous to the birth of her two former children, who are both alive, and apparently perfectly healthy ; but since that period she has had no symptoms of the disease—so far showing, that if syphilitic contamination be the cause of the affection above detailed, it does not necessarily attack every child born of the same parents, even although no steps have been taken to eradicate the disease. Had the cord been firmly entwined around the limb, it might by long-continued irritation have produced ulceration ; but neither the funis nor the limb exhibited marks of pressure having been exerted. I may add, that the quantity of liquor amnii was very large indeed ; and had the fœtus gone on until the full time, it would in all probability have been born with one foot only. In consultation with one of my brethren, it was deemed prudent not to interfere with the knife, as the child appeared very weakly and delicate, and but little hope of benefit from an operation could be entertained.

ST AUBINS, JERSEY, *March* 1844.

*On the Functions of Oxygen in the Production of Natural Phenomena in the Animal Economy.—*I. *Sleep, and some of its concomitant Phenomena. Being the Substance of a Lecture delivered at the Royal Institution of Manchester.* By LYON PLAYFAIR, Ph. D., F. G. S., &c. &c.

THE researches of Liebig have lately shown that much information may be obtained regarding the processes of life in the animal economy, even when these cannot be subjected to direct experiment.   Thus he has thrown considerable light on the phenomena of motion, by applying to their elucidation chemical laws, which analogy led him to expect would come into operation during the exhibition of these phenomena.   But there are many other processes to which he has not devoted attention, but which seem to be explicable on the principles which he has so ably established.   One of these—the subject of Sleep—is of great importance in its relations to medical practice, and yet very little is known of its cause, or of the chemical state of the body during its occurrence.   Park, in his able Memoir " On the Causes of Sleep and Dreaming," has pointed out the errors of those physiologists who preceded him in investigations on this subject ; but he has not succeeded in doing more than establishing that certain physiological states of the body offer inducements to sleep, without showing in what manner these contribute to the production of a quiescent state of the mind. He considers that the true causes of sleep are, the periodical diminution in the action of the heart, and simultaneous relaxation of the vessels of the brain, by which a slower though fuller circulation of blood through the brain is effected.   But this merely describes a physiological state of the body, without showing in what manner that state favours the quiescence of the mind.   It therefore does not furnish an explanation of sleep, but merely points out the condition of the body which induces the repose of the mind. A more accurate definition is therefore desirable, in order that we may fully understand the circumstances which predispose to sleep, or occasion wakefulness.

I shall attempt in this paper to show what chemistry seems to point out as the probable cause of sleep, and of its concomitant phenomena, more with the object of drawing attention to the subject, than with a view to insist on the perfect accuracy of the chemical definition.   Chemists are too apt to fall into the sad error of converting the animal body into a laboratory ; and therefore it is the duty of the physiologist to watch their steps narrowly, and prevent the evils which may arise from this error.   On this account, I wish the views here given to be looked on with suspicion and only accredited so far as they stand in unison with the acknowledged experience of medical practice.

The production of animal heat, according to the chemical view of the subject, is due to the union of oxygen with certain constituents of food, or with the tissues already formed.   The carnivora depend wholly on the waste of the muscular tissues for the maintenance of the heat of their bodies, for the flesh on which they subsist is destitute of the unazotized organic constituents which are employed in supporting the proper temperature of the herbivora.   Liebig has gone far to prove that the oxidation, or waste of tissues in the carnivora, takes place only when the vital powers are employed in the execution of a movement required by the will—at a time, therefore, when they are not engaged in resisting the encroachments of chemical affinity, represented in the body by the oxygen contained in

arterial blood. He has also shown that the waste of the muscular tissues of the herbivora is effected under similar conditions. According to this theory, there cannot be a movement in the body, without a corresponding waste (oxygenation) of matter in the organ subjected to motion. The circulation of blood in the body, and the constant conversion of venous into arterial blood, afford an abundant supply of oxygen to replace that expelled from the system in the excretions.

Whilst the animal receives a quantity of food sufficient to restore the matter carried off by oxygen, there are exhibited no peculiar phenomena. But when it is deprived of food, as in the case of starvation, the changes of matter which occur in the system are very characteristic and worthy of attention. As the oxygen of the blood does not now meet food, with which to unite, it seizes upon the vital tissues themselves, and effects their destruction. The sufferer now becomes rapidly emaciated, and the urine is observed to contain an excessive quantity of the products which result from a waste of the tissues. After this emaciation has proceeded for some time, the substance of the brain begins to yield to the destructive action, and, according to the rapidity of its waste, excited action or delirious paroxysms ensue. Then the heart becomes enfeebled, the blood flows less quickly than it did before, the delirium subsides, and the patient dies from exhaustion. The phenomena observed in fever, and produced, according to chemists, by the entrance into the body of a substance already in a state of oxidation, either as a specific contagion, or as malarious matter, are precisely of a similar character. The point in its progress, bearing upon our present subject, is the increase of force in the involuntary organs, which in time passes over to the voluntary organs, and to the brain, producing as in the former case delirious paroxysms.

The great distinction between animal and vegetable life is volition : vegetables, not being possessed of volition, are constantly engaged in increasing their fabric ; and, therefore, when volition ceases in the animal, it is aptly said to have a *vegetative* life, for the vital powers are wholly employed in increasing the mass of the body. Sleep is the time when an animal becomes assimilated to a vegetable. Physiologists have shown that the two most marked points during sleep are diminished respiration and decreased circulation. They are agreed that, towards the evening, or at the lapse of a certain number of hours of work, the involuntary organs, the heart and lungs, lose their wonted activity, and suffer a periodical diminution of action. Blumenbach describes the case of a patient trepanned, in whom the brain was observed to sink during sleep and enlarge on waking, obviously arising from the circulation being diminished in the former state and increased in the latter. The consequence of this diminution is, that less oxygen is taken into the system. Hence the proportion of venous blood is increased, and the waste caused by arterial blood diminished. The skull being a close cavity, must contain a larger proportion of venous, if there be a diminution of arterial blood in the body. It is the latter alone which can cause the waste of the brain, for venous blood has already parted with its oxygen to materials met with in its course.

Matter in a state of inertia can never manifest the existence of a power. Its motion alone shows that some power is in operation. If the portion of matter used as the organ of manifestation be placed in such a condition as to render that manifestation impossible, there is no evidence to the external world that power was exerted. It has been perfectly demonstrated, that every manifestation of power in the voluntary organs is accompanied by a

D

change in the matter of which they consist. The changed matter being now unfit for vital structures is separated from the body. Müller and all other eminent physiologists are of opinion that the same change takes place in the brain, the organ of the mind. In fact, the contrary opinion involves such violation of analogy, that its adoption, unless founded on the strongest grounds, is inadmissible. We look upon a spot attentively; it gradually waxes dimmer, until it finally disappears. We think upon a particular subject; in time our thoughts are less clear, soon they become strangely confused, and we are obliged to give up the attempt at concentration, by thinking on a subject quite different from that which first engaged our thoughts. This of course implies that the organs of manifestation have become in part destroyed, and that the mind cannot manifest itself to the world, until the impaired organs have attained their proper integrity; for it cannot be conceived that the mind, disconnected with matter, could suffer exhaustion. This involves, it is true, the idea that different parts of the brain are employed in different manifestations, but we know that as far as sensation and intellect are concerned, this is the case, and probability indicates a still more minute division. If, therefore, the brain suffer changes, as do the other organs of the body by their exercise, there is as much necessity for repose in the action of the brain, as there is for a vegetative state of existence to reinstate in their full integrity the organs of volition. Hence the necessity for that quiescent state of the mind known as sleep, when its manifestations cease. The waste of cerebral substance could only have been occasioned by oxygen, which is the only ultimate cause of waste, as far as we are aware, in the animal economy. A deficiency in its supply would therefore retard waste, and allow vitality to remodel its impaired structures.

Such then is the state into which the body is thrown by the periodical diminution in the action of the heart and lungs. The less rapidly that the heart beats, the less rapidly can the blood be aërated, and the oxygen-bearing fluid can be supplied to the brain. The slower that the lungs act, the slower must oxygen enter the system to supply the diminished circulation. And as the brain in sleep is not in a state in which it can change, from a deficiency in the supply of oxygen, the consequence is (if it be admitted that the manifestation of thought and sensation is accompanied by changes in the material substance of the brain), that the manifestations of the mind are prevented, and it becomes no longer apparent to the external world.

This, then, is SLEEP. But if the theory be correct, it must be able to explain the various circumstances which occasion or act as predisposing causes to the production of this state, and if it fail in the explanation of any of these, then is the theory imperfect; but if it explain more of them than the other theories usually received, such as those of Cullen, Blumenbach, Park, and others, it deserves to be considered as a nearer approximation to the truth, and the cases which it fails to comprehend may be included as our knowledge advances.

The first point demanding consideration is, how it happens that a recumbent posture is favourable to sleep. Park justly ascribes this to the diminished pressure of the blood on the heart. The weight of the column of blood from the head to the heart, estimated by Hales as equal in force to five pounds, is removed, and thus its distending force is diminished. The heart now relaxes, and the blood therefore is sent less slowly through the system. Having, by the horizontal posture assumed, acquired a retarded flow, the

blood now comes less rapidly in contact with the organs of respiration, on which the same posture has produced a diminished action, and thus the quantity of arterial blood in the body becomes diminished. Though, therefore, all the vessels in the brain remain as full as they did before, yet, by the deficient supply of oxygen, or, in other words, of arterial blood, and by the retarded circulation of that which does exist in the cavity of the skull, the causes of waste are diminished, and therefore, according to the theory, sleep is produced. For the same reason, sleep ensues when the aorta of an animal is tied, or when arterial blood is removed in large quantity from the body by excessive bleeding. Bichat has shown that when venous blood is withdrawn from a vein and projected into an artery, sleep ensues, amounting to asphyxia, or even to death. The later researches of Dr Kay, now Dr Kay Shuttleworth, have proved that part of the results obtained by Bichat might have been due to an increased pressure on the brain ; but Dr Kay's observations, while they modify, do not set aside the experiments of the former physiologist.

Any thing which removes the oxygen from the blood will in the same manner cause sleep. This is particularly apparent in the debauch of a drunkard. The drunkard takes alcoholic liquors with the production of two opposite effects. At first his heart beats rapidly, the blood flows more quickly, and he enters into that stage of fever which I described at the outset of the paper, in which the rapidity of circulation causes such an enormous supply of oxygen to the brain, that its substance wastes so rapidly as to become unfitted for the seat of the intellect, and delirium ensues. But even while this delirium is at its height, the vapour of the alcohol is penetrating by diffusion every part of his body. Its hydrogen and its carbon are converting arterial blood into venous by depriving the former of oxygen, which is its essential characteristic. The delirium now subsides ; but the alcohol carries on its work of depriving the blood of oxygen, and the latter now not reaching the brain in quantity as it did before, prevents change in its substance, and the drunkard falls down in deep stupor or sleep. To restore him from this state, we withdraw the combustible fluid from the stomach by means of the stomach-pump, and by ammonia and other stimulants endeavour to excite respiration and circulation, in order that the alcohol may be more speedily consumed.

The action of alcohol differs from that of opium or narcotics ; because the permanent effect of the latter, whatever the first transitory effect may be, is to diminish the action of the heart and lungs, and therefore the sleep thus occasioned is brought about by causes exactly similar to those which in the natural state of health produce ordinary sleep.

The tendency to sleep in different animals is in inverse proportion to the amount of oxygen consumed by them, and to the amount of carbonic acid produced. Thus, reptiles and the naked amphibia produce, relative to their weight, according to the experiments of Müller, one-tenth the amount of carbonic acid evolved by mammalia, and one-nineteenth that of birds. We have no numbers to express the tendency to sleep of these animals, but it is known that reptiles are peculiarly liable to be in a state of torpor or sleep, while birds are, on the contrary, wakeful animals. A reptile, such as a frog, will exist in a state of torpor for twelve hours in an atmosphere of pure hydrogen gas, while birds die in the same number of seconds with the ordinary symptoms of asphyxia. Hydrogen gas, when respired with air, gives a tendency to sleep, as shown by the experiments of Allan and Pepys, probably owing to the conversion of arterial into venous blood, as in the

case of alcohol. The same circumstance of a diminished supply of oxygen to the blood, which induces sleep in reptiles, acts also in different mammalia in the promotion of this state, according to the relative size of their lungs. The same circumstance seems to operate in a like way with different men.

The only explanation which I have seen of the tendency to sleep after a heavy and excessive dinner is that first promulgated, I believe, by Macnish, who ascribes it to the drafting away of a large amount of sensorial or nervous power from the brain to complete the digestion of the excess of food in the stomach. This implies the necessity for considering the first act of digestion as an act of vitality, of which, to say the least, there are great doubts. But the drafting of sensorial power, that is, as I take it, of power connected with the operation of the mind—for, if not, its removal could not favour the quiescence of the latter—is a mode of explanation which must be considered entirely hypothetical. I am not aware that an inducement to sleep is in general experienced when a small quantity of an indigestible food is taken into the stomach, and yet this ought to be the case according to the view of Macnish. The tendency to sleep is occasioned when the stomach is too much distended by an excess of food (or if it do occur with a small quantity of an indigestible aliment, then there is an excessive flow of arterial blood to the stomach to assist in the more rapid oxidation of its coat, which the German chemists have dignified as the formation of a peculiar substance termed pepsin). The consequence of this distention is, that the diaphragm which separates the intestines from the heart and lungs is pushed upwards against the latter, encroaching upon the space which ought to be occupied by them, thus preventing their free play, or, in other words, depriving the blood of its proper supply of oxygen, and therefore producing sleep. A person subject to sleep after dinner experiences a sensation of cold, obviously arising from the diminished oxidation in his body. If this cold continue, sleep is prevented ; because it excites—as cold generally does—the respiratory organs to greater activity, and this activity acts as an antagonist to sleep, or in fact neutralizes the effects arising from the pressure of the diaphragm against the lungs. Hence it is that such persons draw their seats towards the fire. The warmth of the fire prevents the increased action of the lungs by preventing a diminution in the temperature of the body, and therefore the lungs are not excited to increased action, and sleep ensues. Hence, also, a gentle walk after dinner removes the tendency by accelerating the play of the lungs, which now, by their increased action, introduce sufficient oxygen into the system to prevent sleep. It is also possible, as has been suggested to me by Mr Noble, that the increased flow of arterial blood to the stomach after a heavy meal may cause a tendency to sleep by withdrawing a corresponding quantity from the brain. The effect occasioned by the pressure of the diaphragm on the lungs until the distention has ceased, is analogous to the more permanent effects produced in very fat individuals. It is well known that very fat people are peculiarly prone to sleep. The fat accumulates around the viscera, pushes up the diaphragm, and lodging around the heart and edges of the lungs, the latter by all these causes are compelled to play in smaller space, and soon become permanently contracted. Hence, any cause which occasions diminished respiration in such an individual will cause him to fall asleep, by diminishing further the supply of oxygen to the system. The mere diminution in the action of the lungs produced by sitting often occasions sleep in such persons. In their case, the further protrusion of the diaphragm after meals almost

invariably produces sleep. This is more marked in animals fattened for the butcher. Pigs in the last stage of fattening exhibit this disposition in a marked manner. After distending their stomachs with food, they give a few ineffectual attempts at an active respiration, and fall into deep sleep. The cause is the same as that first stated, namely, the pressure of the diaphragm against the lungs; this prevents a proper supply of oxygen from entering the system. Macnish was not wrong in his observation that the sensorial power became diminished in the brain after a heavy dinner; but he mistook the effect for the cause, when he attributed the tendency to sleep to the abstraction of this power. The diminution of the quantity of arterial blood in the cavity of the skull appears to be the true cause of sleep in this case; and the decrease of sensorial power is a consequence, but not the cause, of the sleep. It cannot be considered that the absence of a disposition to sleep in some kinds of dropsy, in which the diaphragm is pushed against the lungs, forms a decided objection to the view given of the tendency to sleep after dinner; because the contraction of the lungs being gradual, nature suits itself to the circumstances by exciting a more rapid respiration. Besides, the results occurring in the diseased state ought not to be considered strictly parallel to those we would expect if the body were in health.

Perhaps I might venture to throw out this view as explanatory of the winter sleep of hybernating animals. In summer these animals accumulate fat in their bodies; probably from the very fact of the smallness of their lungs, which prevents the entrance of a sufficient supply of oxygen to convert the unazotized portion of their food into carbonic acid and water. This fat, accumulating around the caul and loins, pushes forward the diaphragm against the lungs. The fat also gathers round the edges of the heart and lungs, and still further diminishes the space in which the latter ought to play. Thus respiration is greatly retarded, in consequence of which the animal falls asleep. This explanation accords with the interesting experiments of Saissy, who has shown that hybernating animals decompose most air when they are in a state of greatest activity, that they respire less during autumn as their fat accumulates, and that the respiration becomes extremely feeble at the commencement of their winter sleep, and ceases altogether when that sleep becomes profound. Spallanzani has confirmed this fact, showing that there must be a cutaneous respiration, for a small amount of carbonic acid is evolved, although the lungs cease to act. During the long-continued sleep of the hybernating animals, the lungs play slowly; in fact, several minutes often elapse between each respiration, and the diminished state of oxidation is proved by the reduced temperature of their bodies, which is generally not higher than four degrees above that of the surrounding medium. In this state they have been aptly compared to lamps slowly burning, their fat being the oil, and the lungs the wick of the lamp. It is true that cold is favourable to the production of hybernation, and this is not in opposition to the theory; but Berthold has shown that hybernation takes place in a warm as well as in a cold atmosphere. If our view be correct, very fat animals should show a similar disposition to sleep, and it is known that a pig in its last stage of fattening is rarely awake. Instances have occurred, in which pigs, being placed in a favourable condition, have actually proved their capability of being in a state of hybernation. Thus Martell describes the case of a fat pig overwhelmed with a slip of earth, which lived 160 days without food, and was found to have diminished in weight in that time more than 120 lbs., an instance quite analogous to the state of hybernation.

It is well known that intense cold is a powerful inducement to sleep. This effect is partly mechanical. The vessels containing blood become contracted ; the blood itself becomes more dense, and flows more sluggishly ; and consequently the brain, from the operation of both these causes, is less freely supplied with arterial blood. The theory therefore explains the result. This is the case only with extreme cold, for a slightly reduced temperature, instead of promoting, often retards sleep. But here also the theory is true to itself, for slight cold is known to increase the rapidity of respiration, and therefore causes an increased supply of oxygen to the system. Slight cold cannot act in this way so easily in the case of hybernating animals as in others, because the accumulation of fat, and enlargement of the glands in the chest and neck, press upon the respiratory nerves and prevent their proper action.

If, then, it be true, that before the mind can manifest itself to the external world, its organ, the brain, must be in the position to unite with oxygen, any thing which tends to withdraw it from that position must cause an impairment of the faculties, even if the cause do not operate with sufficient intensity to produce sleep. This is very apparent in the cold stage of ague, when the blood circulates slowly through the body. In fever, on the other hand, when the blood rushes in a torrent through the system, the mind becomes acutely sensible to every perception. In fever also we find little disposition to sleep, and when this does occur, it is restless and disordered, accompanied by troubled dreams. The chemistry of this disease affords us an instructive lesson with regard to phenomena resulting in the case of health. There are two states into which organic matter passes ;—DECAY, being the change which ensues when a large supply of oxygen is present ; PUTREFACTION, when that supply is deficient. During the waking state in fever, decay or eremacausis proceeds rapidly, and delirium, the consequence of this state, appears when the heart beats quickly and the lungs play strongly ; in other words, when the greatest supply of arterial blood is sent through the system. But during night, when the oxygen-bearing blood is decreased in quantity by diminished respiration—when oxygen is therefore not present in quantity sufficient to combine with the changing matter—then it passes over into putrefaction, indicated by the petechiæ which then appear. This chemical view of fever, either as exhibited in fevers of the typhoid type, or those occurring in malignant forms of disease, is not unimportant. If the appearance of petechiæ during sleep be, as I suppose, an indication that the body has passed over from the chemical state of eremacausis to that of putrefaction, from a deficiency in the supply of oxygen, then the means for the prevention of these states are very different, and the practice in the treatment might be made to suit the periodicity of the return. I throw this out as a mere suggestion for further inquiry. But there are numerous points in support of this view. It is only in the absence of increased action that we observe the ammoniacal nature of the excretions, or the peculiar odour of the breath which indicates a state of change, the very reverse of that of eremacausis. In this state, even on the old system of treatment, bleeding was not resorted to, but, on the contrary, stimulants were employed to cause increased circulation ; for experience pointed out that the change thus begun is that which continues when vitality has left the body.

This case affords a clue not only to the explanation of chronic wakefulness, but also to wakefulness under ordinary circumstances. Some organic matter, in a state of decay, has entered the body, and has thrown the blood

into a similar state of change. To prevent any dispute as to the kind of matter, let us take the case of sympathetic fever, or that of cynanche maligna. A patient enters the hospital with a fractured bone ;—the case goes on favourably,—nothing is at first observed but local irritation ;—then it may assume a malignant form,—pus, obviously by its odour in a state of change, is observed to collect ;—then some of this is absorbed into the blood (for Gulliver states that he has found it there), and communicates to that fluid the same state of change ;—then fever, called sympathetic, ensues ; but if it be " sympathy," it is sympathy exerted by one matter upon another, as a decaying orange excites decay in a fresh orange. This fever, be it observed, does not arise usually when an abscess is unbroken. It is generally excited when the pus has come in contact with air, and has united with oxygen. We try to prevent this union by means of poultices, these poultices being made of materials which will of themselves unite with oxygen, and thus prevent it acting on the pus. Occasionally poultices are used made of yeast and flour, as in the cataplasma fermenti of the London Pharmacopeia, the object being to surround the pus with an atmosphere of carbonic acid, and thus prevent the access of oxygen. The most favourite poultice in use is that made with linseed, which from its oil and mucilage possesses a powerful affinity for oxygen. The state of change, being once excited, goes on, and cannot be arrested without vigorous measures ; sometimes not at all until death ensues, from the combined effects of decay and putrefaction following each other as the oxygen is sufficient or deficient. But the point to be observed is this, that the change in the blood once begun is with difficulty arrested ; the disposition to oxygenize is communicated, and if there be oxygen sufficient, matter will be oxidized. Then, to apply this to our subject, the brain becomes excited by intense thought, by the exercise of imagination, by exciting scenes of amusement, or by whatever cause it may be. The mind, being called into full exercise, must in its manifestations cause a change of matter in the organ in which it resides. But in this case the change of matter is excessive, and the tendency to oxidation is communicated to the part of the brain contiguous to that in a state of change. This also becomes oxidized, and the cerebral substance does not get into that state which favours the quiescent state of the mind known as sleep. The student, after severe and exciting study, is familiar with this state of wakefulness. If his studies have been such as to demand the exercise of his reason, on retiring to rest he endeavours to force his attention into subjects the reverse of the former, generally those of imagination. In other words, he endeavours to withdraw the mind from manifesting itself through that portion of matter which is thrown into a state of change, and by so doing it gradually resumes a state of tranquillity, and sleep then ensues. But if, by excessive or diseased action, such as in insanity, the inflamed (oxygenizing) matter cannot be made to yield its tendency to change, then chronic wakefulness ensues, so often seen in the case of the insane. To reduce this state, we endeavour to extinguish the eremacausis, by lowering the temperature either by cold ablution or by ice, or by administering opium to diminish respiration and circulation. As soon as the change is arrested in the substance of the brain (what physicians call " inflammation," which chemists interpret " union with oxygen"), the brain is placed in a state unfit for being the organ of manifestation, and sleep ensues. The wakefulness of patients afflicted with delirium tremens is obviously connected with the amount of arterial blood and consequent inflammation and oxygenation of the brain, and as disease is merely a disturbance of the equi-

librium in the causes of waste and those of supply, any magnified exhibition of a phenomenon occurring in disease must have its reduced analogue in the ordinary state of health. Wakefulness is that analogue, being a tendency to excessive change in particular parts of the brain, induced, it is true, not primarily by the change, but by the activity of the mind itself requiring that change to aid in its manifestation. Follow the analogy, and we come to dreaming, which, apart from its metaphysical aspect, is a physiological phenomenon, so far as concerns the state of the matter of the brain during its occurrence. In fever and insanity we attempt to reduce the keen perceptions or delirium by the exhibition of remedies calculated to diminish the waste of matter in the brain. Blood is sometimes withdrawn from the system for the purpose of diminishing the number of the carriers of oxygen. Narcotics are administered in order to decrease the number of respirations, and to diminish circulation. In extreme cases, large doses of brandy or other alcoholic liquors are exhibited, for the combined purpose of depriving the blood of oxygen and of arresting putrefaction.

By all these acts it is admitted that the excessive waste or oxygenation of the substance of the brain renders it unfitted for the proper seat of the mind. It is admitted that the rapid change of matter prevents the brain attaining that state which favours the quiescence of the mind. How it does so we do not know, and perhaps never shall. But these are established facts, the foundation of medical and physiological practice, and therefore cannot be denied. And if this be admitted with regard to the whole surface of the brain, may it not be so of a part? Combe tells us of a patient who was afflicted with an unnatural increase of a feeling of the mind, but that by applying ice to a particular part of the head which was inflamed, the feeling subsided to its natural tone. Dreaming, then, might be considered (this I throw out as a mere speculation) to be a disturbance between the causes of waste and of supply in a particular part of the brain. I mean that if, to use the language of phrenologists, without necessarily assenting to their doctrines, the organ of Wonder, from some cause or another, be thrown into a state of oxidation during sleep, that part of the brain would be thrown out of the condition which favours the quiescent state of the mind; Wonder would therefore manifest itself to the external world without being guided by the reasoning powers or judgment, which are in quiescence or sleep. Thus it would revel in all the absurd phantasies to which that feeling of the mind gives rise. I have selected this phrenological organ as a mere example of my meaning, without wishing to insist upon the division of organs as a necessary part of the speculation. If those parts of the brain used as the organs of manifestation for judgment were brought into play at the same time as Wonder, the dream would be more coherent, and, as soon as the change took place to such an extent as to throw the brain into that state which did not favour the quiescence of the mind, then waking would ensue. Hence, according to this speculation, dreaming is a state of wakefulness of feelings of the mind manifested through particular parts of the brain, while other feelings of the mind, manifested through other parts of the brain, are still asleep, and therefore not in a condition, by comparison and reflection, to modify those awake. It is probable that during dreaming there is more arterialized blood in the cavity of the head than during sleep without dreaming, a circumstance indicated by the red flushed appearance of the face during dreams. The speculation is also supported by the class of persons subject to dreaming. A phlegmatic person, whose heart beats slowly and whose

lungs play slowly, rarely dreams.   A fat person, with a diaphragm well pushed up against his lungs, rarely dreams.   But the greatest dreamer is the man of nervous temperament, whose heart and lungs do not play with all the stedfastness of the pendulum of a clock, but by causes yet unexplained are fitful in their action.   For the same reason, in fever, the quickly circulating blood, sometimes propelled more rapidly than at others, is apt to cause this state of wakefulness in particular parts of the brain, by throwing them into a state such as does not favour the quiescence of the mind.   However, this is a subject which is thrown out as a mere speculation for consideration.

It may be objected to the view of sleep here given, that if it were owing to a diminished state of oxidation in the brain, the respiration of pure oxygen ought to retard sleep, whereas, on the contrary, it is observed to render the animal exposed to it comatose, and death ensues after the animal has remained for some time in a state of deep stupor.   Yet both the blood in the veins and arteries was found by Broughton to be very florid, and every thing indicates a high state of oxidation.   Christison and other toxicologists ascribe the death to an increased oxidation or hyperarterialization of the blood.   The phenomena, therefore, seem in direct opposition to our theory of sleep.   But let us consider the case closely.   Arterial blood differs from venous in the state of oxidation of its iron.   The peroxide of iron parts with its oxygen to the tissues, and converts the matter acted upon into carbonic acid and water.   The carbonic acid unites with the protoxide of iron, and is carried as carbonate of iron by the venous blood to the lungs, where it becomes oxidized, and the carbonic acid evolved ; for this gas is incapable of uniting with peroxide of iron.   Now, when an animal breathes oxygen, even the venous blood is arterialized, or, in other words, there is no protoxide of iron left in the system.   But, owing to the excess of oxygen gas, there must be a rapid waste of the tissues, and the formation of a large quantity of carbonic acid gas, which has now no iron in a state to carry it to the lungs.   It therefore accumulates in the system, and the animal becomes comatose and dies, not on account of *oxygen*, but of *carbonic acid* which has no means of escape.   It has been remarked, that there is comparatively little carbonic acid evolved in poisoning by oxygen, for the atmosphere in which the animal dies causes a blown-out taper to burst into flame.   The heart after the death of the animal is found to beat rapidly, and shows the excited state into which the body was thrown by oxygen, until the accumulating carbonic acid produced the peculiar effects for which it is remarkable.   Thus, this simple explanation, while it vindicates the truth of the theory, affords an explanation of the cause of poisoning by oxygen, which toxicologists have always considered as most incomprehensible and singular.   The effects of nitrous oxide on the system are very similar to those of oxygen, and are obviously due to the same cause.   Broughton found that even the venous blood had become arterialized when an animal was made to respire this gas.

The attentive study of the peculiar condition of matter in the various states in which the mind manifests itself, or remains unmanifested to the external world, is of great importance in the treatment of disease.   To take the case of apoplexy and its allied diseases.   I do not allude to apoplexy occasioned by the rupture of an apoplectic sac, but that form in which it arises from the turgid state of blood-vessels in the brain, or in the more rare form of what is termed " simple apoplexy" by Dr Abercrombie.   The state in which the brain is placed in this disease seems to be merely an increased state of the

E

condition in ordinary sleep. The congestion or turgid state of the venous vessels necessarily implies a diminished amount of blood in the arteries ; for the skull, being a close cavity, must always contain the same amount of fluid ; and on this account, if the quantity of venous blood be increased, that of arterial blood must be diminished. Hence, although the use of the lancet may awaken the patient from deep stupor, by removing the deoxidized blood which may have accumulated in the brain by the lesion of a vessel or by some irregularity in the action of the heart, yet it becomes a question, whether the removal of blood, by diminishing the number of carriers of oxygen to the brain, may not cause a tendency to relapse when the temporary obstruction shall have been removed. All I mean by this is, that if we admit the cause of sleep to be a diminished supply of oxygen to the brain, we must admit certain forms of disease, such as congestive apoplexy, syncope, perhaps even catalepsy, to be due to the increased operation of the same cause,—a circumstance attested by the diminished temperature of the body which results in this class of diseases ; if, then, we know the effects to be due to a want of oxygenation of the substance of the brain, we are in a position more completely to regulate our practice in the treatment of such diseases. So, also, in the treatment of wakefulness, dreaming, restlessness, &c., for which the physician is so often called upon to prescribe a remedy, the knowledge of the state of the brain in the state of waking and of sleep, may point out the way to throw it into the state which favours the activity or quiescence of the mind. Hence an accurate definition of these states is not unimportant in a practical point of view.

It does not necessarily impair the accuracy of such a definition, that many assumptions are taken for granted to explain one part of the phenomenon. When we see a wheel revolved by the ascent and descent of a piston-rod, our explanation of the means by which a perpendicular is converted into a rotatory motion is not rendered valueless because we do not trace it to the means by which the force is generated. We have a right to assume the existence of the necessary force, and from this point alone attempt an explanation. So, also, when I say that the effect of a diminution in the play of the respiratory organs induces sleep, as in the case of intense cold, or that their accelerated action retards sleep, as when the temperature is only slightly depressed ; my conclusion may be perfectly correct, without my being called upon to prove the cause of the diminution in the action in the one case, or its increase in the other, because my attention is confined only to one part of the phenomenon. So, also, if I say that syncope is due to a diminished quantity of arterial blood in the brain, I may be correct as to the proximate cause, without being obliged to show by what means the conducting power of the nerves leading to the involuntary organs has become so impaired as to cause the temporary obstruction of these organs. In describing the chemical state of the body, and the effects produced by this state, the duty of the chemist is only to consider the proximate cause of its production, while the physiologist ought to explain the ultimate causes which predispose the body to enter into that state. I have attempted to explain in certain cases one part of the phenomenon, not for the purpose of giving idle play to fancy, but with the hope that these speculations, if they do not of themselves represent the truth, may lead other persons to the consideration of the same subject.

PART II.—REVIEWS.

A Practical Treatise on Organic Diseases of the Uterus. By John C. H. Lever, M. D., &c. 8vo, pp. 228. London, 1843, Longman & Co.

The industry with which Midwifery, in all its departments, has of late years been cultivated in this country, has placed this most useful branch of our profession on a footing fully equal with, and indeed superior in soundness of principle to, the position which it occupies on the Continent. Our periodical literature teems with useful physiological, pathological, or practical observations, and there is no lack of valuable essays on particular subjects, and systems of great excellence.

We do not hesitate to state, that the volume before us, though it does not contain much that is very novel, substantiates, however, by statistics, and an ample collection of well-selected facts, our previous knowledge of obscure diseases, of which, in this unpretending treatise, we have in many instances a graphic account, devoid of those numerous but useless generalities and tiresome speculations by which we are too frequently nauseated while perusing similar works by our continental brethren. Dr Lever is placed in an enviable position for acquiring a sound pathological knowledge of female diseases; and we must do him the justice to say, that he seems to be armed with zeal and industry—qualifications which are indispensable for a man who enters the field which he has undertaken to explore.

The subjects embraced by this volume are classed under three heads, viz. *Part First,* Acute and Chronic Inflammation of the Uterus; *Part Second,* Specific Diseases; and *Part Third,* Malignant Diseases. We extract the following account by the author of the relative proportion of functional to organic disease.

" Of 2582 who applied for relief, there were 1660 cases of functional to 922 of organic disease. In 905 cases of functional derangement, there were with Leucorrhœa 310, Menorrhagia 125, Chlorosis 145, Hysteria 68, Dysmenorrhœa 27, Irritable Uterus 19, Vicarious Menstruation 7, Epilepsy 6, Chorea 2, Hemiplegia 2, Amaurosis 1. In 483 females with organic diseases, there were affected with Inflammation of the Os and Cervix 171, Carcinoma Uteri 104, Hard Tumour of the Uterus 69, Fungoid Disease

45, Chronic Inflammation of the Uterus 44, Induration of the Os and Cervix 28, Polypus 12, Chancre of the Os Uteri 4, Miliary Disease of the Os and Cervix 3, Hysteritis 2, Cauliflower Excrescence 1." P. 2.

To his own, Dr Lever adds the experience of resident practitioners abroad, regarding the comparative frequency of the diseases under consideration, which, independently of the valuable matter furnished by himself, will recommend his performance to his professional brethren as a useful book of reference. Thus,

"At *Corfu*, one in 50 suffers from dysmenorrhœa ; carcinoma uteri happens in the same proportion ; while all who are affected with the latter have had syphilis in early life. At *Jamaica*, 20 out of every 100 adult white females are subject to functional derangement ; 10 per cent. to carcinoma, all of whom had painful or suppressed menstruation previously : diseases of the uterus, whether functional or organic, are very rare amongst the blacks. At *Quebec*, among the French Canadian women, carcinoma uteri is said to occur in the proportion of 3 in 50, and in females who had previously been affected with amenorrhœa or dysmenorrhœa. The same observations are said to be applicable to Indians, more especially those located in the vicinity of large towns. Among the British Canadians the proportion is stated to be the same, and that the subjects had always previously suffered from dysmenorrhœa. In convents the occurrence of functional and organic disease is more frequent ; 10 women in every 50 are said to suffer from organic lesion. At *Halifax*, one woman in 40 is said to be affected with organic disease, and generally those who had been subject to scanty menstruation. During several years' experience at *Belle Isle, Upper Canada*, only one case of carcinoma uteri had been met with, and this too in a woman who had suffered from deficient and painful menstruation. In *Montreal*, 8 in 50 are said to be affected with functional derangement ; 2 in 50 with organic disease." P. 3.

From the foregoing observations it is evident that dysmenorrhœa frequently predisposes to organic disease of the uterus, while it must also be well known to those engaged in practice that the same causes which often in early life give rise to painful menstruation, as the depressing passions, are likewise, at a more advanced age, frequently concerned in producing carcinoma uteri.

Our author next proceeds to inquire whether married or single women are most disposed to organic changes, and a very little consideration of the subject would naturally lead us to infer that the former are far more so than the latter, owing to their greater liability to excitement, and to injuries arising during sexual congress and the important function of 'parturition ; and hence it is very satisfactorily shown that matrons are more disposed to organic disease by a very large majority. Thus " of 98 affected with polypus, carcinoma, fungoid disease, and hard tumours, 89 were married and six single." P. 5.

The *third question* considered by the author (p. 5) is, " Whether

the diathesis accompanying organic disease impairs the faculty of conception?" The result of Dr Lever's experience tends to prove that such a disposition exerts very little influence in limiting the frequency of conception; and accordingly, of the 89 women already referred to, 8 only were barren. This is quite in accordance with our own experience. We cannot remember a single instance of chronic organic disease of the uterus in a barren female; while all the applications that have been made to us were by matrons, some of them indeed with rather a numerous progeny. And on considering that the ovaries, not the uterus, hold the first rank in the reproductive system of the female, we should not expect that the latter organ, except when the seat of extensive morbid lesion, would exert much influence in impairing the reproductive function.

The *fourth* and last *question* considered by our author is, "Whether organic disease interferes with the vitality of the offspring?" Our own impression, derived from many years' experience, though not on so extensive a scale as that which Dr Lever has had the good fortune to enjoy, is, that the vitality of the foetus, except when there is severe constitutional disturbance, and not always even under these circumstances, is not compromised. We have been consulted in cases of enlargement and remarkable incrassation of the cervix uteri, and where, but a few weeks previously, such individuals had produced living children at maturity : we have known women with cauliflower excrescences of the os uteri produce living children at maturity, though for many weeks previously they endured paroxysms of excessive pain, and copious hemorrhagic and leucorrhoeal effusions : and we have somewhat recently assisted at a labour which was protracted in consequence of the os and cervix being the seat of numerous cauliflower excrescences, and other fearful disorganizations; but a living, mature, and an apparently healthy offspring was produced. Our author's experience on this head is very satisfactory. " 81 women conceived 553 times, 43 conceptions terminated in abortion, and 510 children were born at the full time; and of these 510 children, only 12 were stillborn, owing in all probability, as it is inferred, to the non-dilatability of the parts, and consequent pressure on the foetus." P. 6.

A considerable portion of the work is now taken up with some pertinent directions regarding the various modes of examination, the varieties of specula, and the manner of using these instruments. With these particulars we do not deem it necessary to

occupy the time of our readers, since the different methods of investigating uterine disease are familiar to every one, and since even the village apothecary must be intimate with the method of introducing the speculum, as it is now become so fashionable among the higher orders of the fair sex of this country, that were a practitioner not to employ it for the exploration of pelvic disease, the patient would think herself quite neglected. We shall conclude our observations on this section of the work by a single remark on an expression used by our author (p. 8), viz. " dislocation of the uterus." To ourselves this phrase is new, and by no means so appropriate as the one we have been wont to employ ; and were it not that the writer has shown so much good sense in the construction of his treatise, we should have been more than half inclined to think that either his tongue or his fancy had been dislocated when he used this expression.

The next section of the work is devoted to the consideration of acute, sub-acute, and chronic inflammation of the uterus. Here we did not expect, nor do we indeed find, any thing new, except that we are informed (p. 39), " That not unfrequently women who have suffered from hysteritis do not again become pregnant, in most cases from closure of the Fallopian tubes ;" and that the use of ergot is followed by sub-acute inflammation (p. 43). On this last point the author will be permitted to speak for himself :—

" In some cases the inflammation is of a sub-acute kind from the first, and especially in those where ergot has been given improperly. I had under my care five females attended by the same individual, to all of whom he had given the secale, and who were affected by the same symptoms."

In regard to sterility being a sequence of hysteritis, Blatin and Nivet (p. 342) entertain the same opinion ; but so far as we are aware, they are the only modern writers, besides the author, who do so. Chambon, Boivin and Dugès, and Duparcque, are silent on the subject ; and as to ourselves, although our experience in hysteritis, under the different forms particularized, has been pretty extensive, we have never had occasion to make any corresponding observation. Were the Fallopian tubes at any time the seat of inflammation, or frequently subject to excitement, as they are liable to be in prostitutes, and their fimbriated extremities to cohere, in consequence, to some adjoining structure, barrenness would most probably be the result ; and, accordingly, cases are recorded where this has happened.*

---

* Morgagni Epist. xxvi. art. 14, xlviii. art. 32 ; Med. Chir. Trans. Lond., vol. viii. p. 503, vol. xiii. p. 55.

The fact stated by Dr Lever respecting the secale is valuable in the extreme; and we consider the profession under deep obligation to him for his discernment. For ourselves, we can say little of this dangerous agent from personal observation; but we venture to assert, from what little we have seen, and from conversations with many of our brethren, that there is not a man of candour engaged in midwifery practice who could deny, if he were solemnly asked the question, that he had known the fœtus destroyed where ergot had been exhibited. We regret much that Dr Lever has not stated what he means by its improper use, and under what regulations it had been exhibited in the cases to which he refers; but we earnestly trust he will do so on an early occasion; indeed he is bound to communicate his sentiments on this important subject. We can say that ergot has been followed by the most mischievous effects on the fœtus, such as fractures of its cranial bones; or when it escaped these injuries and was born alive, we have known meningitis supervene.* We have occasion to know, that as it was at one time with mercury in syphilis, so it is now with the secale—far too indiscriminately employed. Some of our brethren never think of going to a case of midwifery without being in possession of ergot; but, however excusable it may be for gentlemen in the country to go " armed at all points," in town, however, their doing so is most reprehensible, since the agent in question might possibly be used to save time and trouble in a case in which, on mature reflection, it would never have been employed.

In the treatment of chronic hysteritis, we find the following most judicious advice, and which we would strongly recommend to the attention of such of our brethren as are wont indiscriminately to inundate the sexual canal with lunar caustic solutions, and other powerful astringents.

"In the advanced stages, the decoct. papav. cum alumine, in the proportion of ℥ij. of the latter to a pint of the former, is a very valuable remedy: but in employing vaginal injections, we must be especially careful to refrain from the use of astringents while there are symptoms of activity about the disease." P. 55.

We coincide entirely with Dr Lever regarding the use of astringents, which, when used at too early a stage, we have known to occasion distressing consequences by aggravating the disease, and rendering the case equally untractable with scirrhus itself.

---

* For some valuable observations on the injurious effects of ergot, and the regulations which should be observed in exhibiting it, see Campbells' Midwifery, 2d Edition, pp. 184 and 244.

We have next some very judicious directions for the treatment of the sequelæ of chronic hysteritis. For hypertrophy of the uterus the author eulogizes very highly the use of leeches, mercury, and iodine. Of the former he directs six to be applied to the uterus twice a-week; he gives the preference to the hyd. c. creta given twice daily, until the system is gently affected; and he employs the protoiodide of mercury with great advantage.

We cannot do better than transcribe for the perusal of our readers one or two illustrations of the treatment pursued, from the work itself :—

" E. P., æt. 25, of fair complexion, and pale exsanguine countenance, married at 16, has given birth to five children, all of whom except the last were born alive. In her last labour the shoulder presented, the process continued 48 hours, and turning was practised. From the time of her delivery she has suffered from uneasiness, bearing down, constant weight, tenesmus, difficulty in micturition, and a copious leucorrhœal discharge. The catamenia recur every fortnight, continue four or five days, and occasionally contain coagula. On examination per vaginam, the uterus was found to be increased in size and weight, and to press low in the pelvis; a firm cicatrix was to be felt upon the middle of the posterior lip. When the hand was placed above the pubes, the enlarged organ could be readily detected. She was ordered hirud. xij. reg. pub. et inguin. bis hebdom. Fotus conii ter die injiciend. Pil. conii c. hyd. o. n. mist. mag. c. mag. sulph. ½ ter quotidie. This treatment was persevered with for three weeks, when the medicine was changed for the following :— Hyd. protoiodid. gr. ss. confect rosæ canin. q. s. ft. pil. omni nocte sumend. horâ decubitûs. ℞. pot. iodid. gr. iij. extr. sarsæ. gr. x. ter die ex mist. camph. In this plan she persevered six weeks, and during that time she was twice leeched, as she suffered from severe pain. The uterus became at first softer, then smaller, the intervals between the appearance of the catamenia more distant, while the secretion continued but three days, and was of a natural colour." P. 58.

" M. T., æt. 44, has borne nine children, and miscarried once. Menstruation commenced at 15, and during these periods she was frequently confined to bed from excessive pain. The secretion was skinny, and occasionally contained coagula. She had pains in the back, loins, and thighs, and the catamenia continued three weeks, with a white leucorrhœal discharge during the intervals betwixt the menses. In the last twelve months the catamenia have returned at intervals of from two to three weeks. On examining the uterus it was found enlarged, its vessels strongly throbbing, its weight much increased, aperture swollen, turgid, highly vascular, and of a livid colour, but free from abrasion. She was ordered 6 leeches to the vagina twice a-week, a mild astringent injection, the dec. tormentillæ c. alumine, and the following medicines : ℞. pil. hyd. gr. ij. ext. conii gr. iij. m. ft. pil. omni nocte sumend. ℞. mag. sulph. ℥ss. tinc. cinchon. c. ℥j. syrup aurantii ℥ss. infus. gent. c. ℥x. ft. haust. ter quotidie sumend. After continuing this treatment ten days her gums became rather tender, but the uterus smaller, less swollen

and turgid. She persevered in this plan of treatment six weeks, and was then perfectly convalescent." P. 61.

We come now to consider very briefly *induration* of the uterus as a sequela of chronic inflammation. Our author says that,

" Before resolving upon the treatment, we should first satisfy ourselves that the induration is the result of chronic inflammation, and not the commencement of malignant disease. Induration, the result of chronic inflammation, may be known by its regular feel and by the history of the case. In most instances there has been the creamy discharge. Induration, the commencement of malignant disease, is in nodules, the malignant depositions being generally secreted in central points." P. 64.

We must beg leave to tell Dr Lever that he has treated this important point with far too much brevity, and we think not with strict correctness. If the diagnosis were as simple as the foregoing passage would lead us to believe, our duty in this respect would be easy indeed; but it is far otherwise, and two frequently the diagnosis cannot be established with any degree of confidence even by veteran practitioners; and we are therefore a good deal surprised that the author has not enlarged on this subject. For ourselves, we have long been of opinion, not only that it is extremely difficult, if not impossible, in many instances to draw a line of demarcation between induration the result of chronic inflammation, and induration as the incipient stage of cancer, but that indeed the former degenerates into the latter; and in these opinions we are satisfactorily supported by Boivin and Dugès (vol. ii. p. 277), and Duparcque (vol. i. p. 242), who are the most recent and among the best authorities on uterine diseases. To the writings of Sir C. M. Clarke we shall not refer, because though valuable at the time they were published, the pathology of organic diseases of the uterus was then, comparatively speaking, in its infancy. For indurations iodine and mercury are highly eulogized, with the local abstraction of blood by scarifying the os uteri, and the use of aromatic tonics, as columba and cascarilla. In the early stages of this variety of degeneration we are quite aware that much may be done to benefit the condition of the patient; but while we would encourage perseverance in the use of the means particularized, we consider it but just to caution our younger brethren against being too sanguine of success; for those cases, as every candid and experienced practitioner must avow, too frequently baffle the best-directed efforts.

The *fourth sequela* of chronic hysteritis noticed by our author (p. 68) is *simple ulceration*, which he informs us, and

very properly, can only be elicited by ocular inspection aided by the speculum, for the ulcer sometimes does not exceed a pin-head in size. " In many cases the ulcer resembles a cut surface ; in some it is thin, shallow, and deeper than the mucous membrane, while not unfrequently it bleeds upon the slightest touch." These cases are preceded by symptoms of inflammation, as rigors, reaction, fever, obtuse pain, a sense of dragging in the loins, weight in the anus, increased uneasiness during menstruation, pruritus of the vulva, and leucorrhœa varying in colour and consistence, usually streaked with blood. The posterior lip of the os uteri is thought to be more frequently the seat of ulceration than the anterior, but either may be affected. Among other *causes*, the author particularizes the use of irritating astringent injections, a practice the most re-prehensible where there are such symptoms as indicate irrita-tion of any pelvic viscus, and against which we cannot too often reiterate our disapprobation.

We give the following passage as the author's sentiments regarding the diagnosis betwixt simple, syphilitic, and corroding ulcers, without at all assenting to the opinion that these different lesions are to be distinguished from each other so easily as the brevity of Dr Lever's remarks, and the air of confidence with which they are written, might lead a reader unacquainted with these subjects to infer. We need only remind practitioners of the difficulty of deciding in cases of syphilis, even, though so fre-quently accustomed to examine them, whether the sore be of this nature or not, unless from the moral character of the patient there be strong presumptive evidence.

Diagnosis.—" They may be distinguished from syphilitic ulcerations by the regular hard edges of the latter, by the yellow sanious discharge ; and in some cases assistance is gained from the moral character of the female. Its limited extent and superficiality, its slighter constitutional effects, the absence of large bleedings, and the discharge, distinguish it from corroding ulcer ; while from the malignant cancerous ulceration it may be recognised by the want of hardness from morbid deposit, by the nature of the pain, and the character of the discharge." P. 69.

Dr Lever's treatment of these cases is very judicious, and were it not for our circumscribed limits, we should feel justified in quoting the whole of it, but we trust to the professional com-munity consulting it for themselves, as it will amply repay them. In the acute stage the local abstraction of blood is inculcated, with other agents calculated to allay irritation ; and in chronic cases the direct application of lunar caustic and the improvement

of the general health are recommended, and we entirely concur in the recommendation.

The next section is devoted to the consideration of ulcers on different parts of the uterus in cases of procidentia, which require nearly the same remedial means as similar lesions affecting the organ while *in situ*. To the foregoing succeeds a succinct notice of *enlargement of the glands of the os and cervix uteri* as a sequela of hysteritis, which is characterized by pruritus amounting in some instances to nymphomania, slight leucorrhœal discharge, and occasionally redness of the vagina, which may be the result of frictions by the patient herself. By the aid of the speculum—and no other mode of exploration should be confided in—small granules, not unlike millet-seeds, white, soft, seemingly vesicular, and numerous, are observed. For these cases, cupping or leeching, according to the amount of irritation, *or in the absence of tenderness*, solutions sulph. ferri or nitrat. argenti are recommended. All these sequelæ of hysteritis are illustrated by cases which greatly enhance the value of the work.

Part II. of this publication (p. 79) embraces what the author denominates *Specific Diseases*, viz., *first*, Tumours of the Uterus, which are allowed by all writers not to possess any malignity, as polypus; and, *secondly*, Fibrous Tumours. Though unquestionably a most valuable section of the treatise, we are nevertheless obliged to pass it without comment, and with the exception of a solitary case, without quotation, since the subjects embraced have recently received great attention, and must be familiar to all our brethren who feel an interest in the diseases of females; but Dr Lever must not on this account suppose that we consider his second in importance to the additions which have of late been made to our knowledge in this department of practice. From this portion of the work we quote the following instance of a very rare disease, viz. *Strumous Tubercles of the Uterus*. We shall be excused for this lengthened quotation when we state that Louis met with only one instance in 358 cases which he had examined.

Case xxx.—" I was requested to visit a lady of 26, who had been married only ten days, and had previously enjoyed good health. After her marriage she went on a long journey, and while some distance from home, in descending the stairs of an hotel, she felt a pain at the lower part of the abdomen. The uneasiness did not subside, and was accompanied by sickness, impaired appetite, &c. The bowels were regular, but the pulse was excited. She missed her next monthly period, and the sickness, if any thing, increased; as also the uneasiness in the abdomen, and her countenance became anxious. In about three weeks there was a decided fulness in the

lower part of the stomach, and upon careful examination a tumour could be felt. The pain over the swelling was greatly increased by pressure; the sickness augmented; the emaciation increased; her appetite became less; and notwithstanding tonics, iodine, &c., were prescribed, this young lady became decidedly worse. I consulted with two eminent physicians, and they concurred with me in opinion that this young lady was not pregnant, that the disease under which she was labouring was tubercular peritonitis, and that the tumour in the region of the uterus was probably a large tubercle, or a cluster of tubercles. Vaginal examination detected the uterus to be completely fixed in the pelvis. Within five months from the date of marriage, this lady (without the menses having made their appearance) became greatly emaciated. The immediate cause of her death was the giving way of the diseased intestines, and consequent escape of their contents into the abdomen, causing peritonitis. Upon examination the whole of the peritonæum was found to be studded with tubercles; attached to the uterus there was one of very large size; while, in addition, the whole of the structure of this viscus was completely infiltrated; in fact, the tubercular deposit appeared to be universal throughout the body. This case was remarkable from the patient being very robust and stout, with rosy cheeks, &c., before marriage; and from her being seized, ten days after marriage, with acute pains which continued until her decease." P. 132.

Part Third of the work, extending to about ninety pages, embraces what are styled malignant diseases of the uterus; such as cauliflower excrescence, corroding ulcer, melanosis, and cancer. As it would be pure waste of time to enter into any elaborate comment on these subjects, since, generally speaking, they baffle our ingenuity and judgment, and that scarcely any thing can be said regarding them beyond what is already well known, our readers will excuse us if we merely take a rapid glance at each of them in succession. Our author gives a very good description of cauliflower excrescence, which he says

" Consists in the growth of a highly vascular tumour, of a bright flesh-colour, with a granulated surface, generally growing from a part or the whole of the os uteri, and sometimes also from the uterine cavity. This, in comparison with the other organic diseases of the uterus, is rare, our author having met with it only *three times* in a list of more than 350 cases of cancer of the womb. The structure of this excrescence is pretty firm; but still, if pressed strongly by the finger, it bleeds. It has a very fine membrane spread over it, which secretes a copious watery fluid. After death the tumour disappears, nothing being left but a mass of flocculi, apparently empty vessels: the same effect takes place when the excrescence is noosed. If a ligature be applied, and the tumour removed beneath it, it will rapidly grow again. It has been met with in females of all ages, temperaments, and habits, and in the single as well as the married; injuries during labour have been supposed to occasion it, but this would not account for it in females who never had a family; by others syphilis and excessive coition have been thought to lay a foundation for it, but prostitutes do not seem to be more subject to it than virtuous and prudent females. It commences with a moisture in the external parts, amounting very soon to

a copious watery discharge from the vagina, in quantities generally so profuse that several napkins are moistened daily. The countenance becomes blanched and sallow, eyes sunk, vision impaired, pupils enlarged, respiration hurried during exertion ; there is palpitation, pain in the left side, despondency, dyspepsia, thirst, emaciation, tympanitis, and œdema of the pelvic limbs. At first the discharge per vaginam is merely streaked with blood, but it soon becomes quite hemorrhagic. The ordinary examination merely will excite bleeding." P. 138.

The foregoing corresponds very nearly with our own experience in four cases which came under our observation : in the *first*, the patient was seven months pregnant, and there were three tumours, each the size of a child's clenched hand, attached to the os uteri ; the *second* was a lady about 55 years of age, with only one excrescence of this character, like a child's flattened hand, growing from the posterior lip of the uterus ; the *third* was a lady of 52, with a tumour of this nature the size of a small pear, growing from the interior of the uterus, but unlike all the other cases we met with, it was so soft that the least interference broke off portions of it ; and the *fourth* case we met with recently in a woman in labour, attached to whose os uteri there were five or six of these tumours, from the size of a filbert to that of a walnut. As no other than the most unfavourable prognosis can be offered in the foregoing cases, we shall merely make a bare enumeration of the means which have been used for relief, and which can only be considered as palliatives : these are, excision, caustic, with the more powerful vegetable and metallic astringents, tonics, a bland nutritive diet, and abstinence from stimuli and sexual congress.

We are next (p. 145) furnished with a description of *corroding ulcer*, of which, as it resembles cancer in many particulars, and is equally intractable, we shall merely state its principal features. This term was first used by Dr John Clarke, to a disease which consists in a malignant ulceration of the os and cervix uteri, the remainder of the organ being scarcely even enlarged. One singular feature of the disease is, that there is no deposition of new morbid matter in any part which it affects. It may extend to the bladder, rectum, or to the upper regions of the uterus. The glands about the cervix are the structures first affected, and most frequently in females verging towards forty, or the period when the catamenia take their final leave. When the parts are examined after death, sufficient evidence is displayed of serious devastation of structure, but without induration, hypertrophy, or new deposit.

" Females of a lymphatic temperament are said to be more liable to the disease than other subjects. It is preceded by an occasional sense of uneasiness in the pelvis, heat, and leucorrhœa, all of which are unfortunately too often disregarded until hemorrhage appears. As the malady advances there is emaciation, dyspepsia, gastric irritation, sallow countenance, excited pulse, a sense of general weakness, of weight and pain in the back, extending to the loins and around the lower part of the abdomen. The pain varies, producing an obtuse, lancinating, or burning sensation. The hemorrhage recurs, sometimes with an alleviation of the uneasy feelings ; and during the intervals there is an ichorous discharge from the vagina, so acrid as to excoriate the external parts. For some time at first the patient's complaints are considered hysterical, and her ailments receive no attention until hemorrhage appears, when an examination per vaginam is granted, which discovers an amount of mischief previously unsuspected. If we trust to the ordinary examination, the ulcer, unless large, may not be discovered, for the patient scarcely complains of pain when the finger is brought into contact with it." P. 146.

Some years ago we had occasion to be consulted in a case of this nature, which two other physicians—one of them most experienced—had some time previously seen ; but the patient being considered by them to be merely hysterical, and her friends advised not to encourage her whims, no local treatment was adopted. The day after visiting this individual, the speculum was used for the first time, and a large ulcer discovered in the posterior lip of the os uteri. She ascribed her complaints to ill usage from her husband, and died three months after we had been called. In every suspicious case, as exploration by the fingers is insufficient, the speculum must be employed ; and by it we shall probably elicit—not a deep ulcer—but one much extended, with a rough granulated surface. *A marked feature of this complaint, and which distinguishes it from carcinoma, is, that the uterus possesses fully as much mobility as in a state of health, and that it is not enlarged.* Ulceration advances until a breach is formed in the bladder, or in the rectum, or in both, which reduces the patient to a loathsome condition, and soon terminates her sufferings.

Dr Lever tells us that these are hopeless cases, and for an obvious reason ; because, from the natural delicacy of the sex, an examination is too frequently resisted until the disease has made such progress that neither excision nor any other remedy can avail. Were an opportunity afforded of making an efficient inspection of the uterus when its os or cervix is merely in a high state of irritation, or even ulcerated in a trivial degree, the practitioner should not despair of procuring permanent relief by cupping on the sacrum, and the local application of leeches ;

caustic after excitement has been subdued, and other appropriate measures. Dr Lever says (p. 151), that " if, when first consulted, we are certain of the nature of the ulceration, and if there be a septum of healthy tissue between the disease and body of the uterus, in my opinion we should act wisely by excising the os uteri." We are happy to state that there is (p. 209) but one other such absurd passage in the volume before us ; if there had been many, we certainly should not have devoted so much time to its analysis. The commencement of the disease is the only time for even contemplating excision ; and we defy the most experienced to decide what is the nature of the complaint at that stage ; and, secondly, we deny that the os and cervix, while the uterus is *in situ*, can ever be examined with such precision, however practised and acute the eye may be, as to determine if there be a septum of healthy structure between the diseased point and the body of the womb. We hope, therefore, that no one will act on the dictum of Dr Lever by practising excision, but, on the contrary, trust, in the incipient stage, to local bleedings— an antiphlogistic regimen—hip warm bath, with strict tranquillity of mind and body, which we are confident will be found far safer and more certain than the knife, the utility of which must at best be problematical, and may only accelerate the fatal catastrophe.

We have next (p. 151) a case of very rare disease, viz. *Melanosis* of the uterus, in a woman of 45, who was at first supposed to be the subject of hard fibrous tumour. She had been more than twelve months complaining when she applied to the author. Four months from the date of her application, a profuse flow of blood escaped per vaginam, and continued for a long time, followed in the course of a few days by a dark, brownish black discharge, having a peculiar odour. In six weeks from the commencement of the hemorrhage, she was carried off by a diarrhœa. On *dissection*, the uterus was found enlarged, and a tumour at the right and anterior part of it, the size of a fist, developed in the proper structure of the organ. This adventitious formation varied in consistence, being firm externally, and much softer towards the uterine cavity ; the mucous membrane covering it was destroyed, and the tumour itself converted into a melanotic mass.

Cancer uteri is divided by our author into three stages, the premonitory symptoms constituting the first. This division we consider a useless refinement, and partaking somewhat of that

disposition for generalizing so characteristic of our Gallic neigh-bours; but to gratify the writer, we shall follow him very briefly in what he considers the *first stage.*

" An examination per vaginam discovers the edge of the os uteri in-durated, sometimes fissured, irregular in form, projecting unusually into the vagina, studded, in the situation of the muciparous glands, with projec-tions which feel like gravel or grains of shot, that become painful on pressure, which also occasions sickness. The use of the speculum displays turgidity of the os uteri, which will be seen of a deep crimson colour, while the projecting shot-like points present a bluish hue. As yet the disease is confined to the os and lower part of the cervix, and the uterus is generally moveable. This state is very tardy in its progress, for we have known it continue with little alteration for years.

" In the *second stage* the uterus subsides considerably in the pelvis, by its weight and change of position interrupts the functions of defæcation and micturition, and occasions uneasiness while the patient is either in the erect position or walking. The lancinating pains, which were at first but trivial and rare, are now frequent and severe, and the discharge from the mucous lining is increased, occasionally streaked with blood; but as yet it is destitute of fœtor and acridity. The uterus is now tumefied and indurated, its aperture notched and dilated, and the organ is less moveable than in the first stage. Previous to ulceration taking place, we may by ocular inspection be able to discover some one point of the indurated part softer than the rest; and in this spot, which feels very painful, ulceration will commence. During this inspection also, the cervix presents a swollen, tense, and shining appearance, a spongy feel, and a deep brown colour.

" In the *third stage* the pains are much aggravated, described as lancinat-ing, burning, or gnawing, recur in paroxysms, more severe at night than during the day-time, occasionally accompanied by sanguineous discharges, which are the first indications of a breach of continuity, and in their absence leucorrhœa of the most offensive odour. This latter discharge changes in colour from brown to dirty white, green, or black, slightly effervesces with sulphuric acid, and turns syrup of violets to green. As the disease progresses, the bladder and rectum are perforated, the latter more frequently than the former. An examination of the interior of the pelvis detects a hard, irregular, immovable mass, filling its cavity, the os uteri considerably more dilated than usual, indurated, painful to the touch, and bleeding on the slightest interference."

Dr Lever does not believe that the disease can be transferred from one subject to another, neither do we. He says,

" *I have for some years paid particular attention to this question, in order to ascertain whether the husbands of women affected with ulcerated carcinoma have contracted the disease, and in no instance have I been able to detect the supervention of cancer in the male.*"

But although the complaint cannot be transmitted, we quite concur with our author in thinking it hereditary. He says,

" *I have seen several instances of mothers and daughters dying from this malady; and in one instance, I traced the disease through three generations, the grandmother, mother, and daughter, all falling victims to it. The regis-*

ters of the obstetric out-patients of Guy's Hospital show that the proportion of cases of carcinoma uteri to other cases of uterine disease is nearly as 1 in 7."

Females of a lymphatic temperament are thought to be most disposed to it; and from what was stated in the commencement of this analysis, those who have been martyrs to dysmenorrhœa must certainly be included in the list. We consider mental anxiety, the depressing passions, repeated abortions, and a laborious occupation, fertile exciting causes; and though denied by our author, we have had many painful proofs that gonorrhœa may be viewed in the same light. Dr Lever satisfactorily repudiates the opinion that virgins are more subject to the disease than married women; from his observations (*Med. Chir. Trans. Lond.*, vol. xxii. p. 269) it would appear that from the "40th to the 50th year is the most frequent period of attack. Of those affected, single women bear a proportion of 5.83 per cent., married women, 86.6, and widows, 7.5." We also extract the following interesting statements: "The number of women with fair complexion affected with cancer uteri amounted to 20.8 per cent., of those with dark complexion, 79.16 per cent.; 25 or 20.8 per cent. enjoyed good uterine health in early life, while 95 or 79.16 per cent. had suffered from functional disease or syphilis; death occurred in 107 cases, the average duration of the cases being $20\frac{1}{4}$ months; the shortest duration of the disease was 3 months, and the longest 66 months."

In remarking on the *Prognosis*, our author believes, and we unhesitatingly agree with him, that after the disease has passed into the stage of scirrhus, it is quite hopeless.

On the subject of *Diagnosis*, we are told to rely on the shot-like bodies deposited in the seat of the ova nabothi, the presence of induration, and the less sensitive condition of the diseased structures in carcinoma uteri, to enable us to distinguish this from irritable uterus. From simple induration, scirrhus is known by the greater hardness of the part affected, its being more lobulated, by the increased deposition into the surrounding structures, and the uterus being less moveable.

In the *treatment*, the author places great reliance, *during the first stage*, on cupping upon the sacrum, the direct application of leeches to the uterus, anodyne injections, mercury to produce a gentle effect, in combination with opium, hyoscyamus, conium, or camphor; while the liq. potass. arsenit. is highly eulogized for subduing uterine uneasiness. Counter-irritants are also

recommended, as a succession of blisters, or an issue over the sacrum, or either sacro-iliac symphysis. All stimuli—regiminal, mental, and sexual, should be strictly avoided; while tranquillity and ease are to be sedulously observed. Our author does not seem favourable to the excision of the os uteri, neither does any practitioner of this country, except such as are guiltless of common sense. We are saved the trouble of considering the merits of the merciless and sanguinary operation of removing the uterus while *in situ*, or emboweling a woman alive, since in this country, and on the Continent, indeed, that expedient is disapproved of in the most emphatic language, by those even who performed it successfully.

We now take leave of Dr Lever by wishing him every success in his endeavours to enlighten the profession; and by strongly recommending our brethren to possess his work, as one from which the veteran as well as the tyro will derive much valuable information.

The Physiology of Inflammation and the Healing Process. By BENJAMIN TRAVERS, F.R.S., Surgeon Extraordinary to the Queen, &c. &c. 12mo. Pp. 226.

IT is not wonderful that inflammation should occupy so much of the thoughts of the medical profession. It is the field in which medicine achieves its most signal triumphs. And should an occasional doubt arise in the mind as to the reality of the empire of medicine over diseases, with ordinary discernment, it is most easily silenced by reflecting on the ravages of acute inflammation in some seasons, and on the power of the lancet to check its destructive progress.

No doubt, there are periods, the medical constitution of which (so to speak) is but faintly distinguished by a tendency to that highly acute inflammation of vital parts which the lancet so effectually combats; and there are times when the pathology of the day is apt to take one-sided views, and to draw its colour too exclusively from a few sources, without surveying the whole of the wide range which diseases occupy.

Even our own time, marked as it is by the extensive diffusion of medical knowledge, is not exempt from the suspicion of being subject to some undue influence of this kind. And what with a

too exclusive attention to the course of inflammation in hospital practice,* among patients debilitated by previous diseases and by the poverty and vices of large towns, what with an unequivocal defect of the strong disposition to high inflammation in the medical constitution of the seasons, for some time past, we are now and then threatened with the rise of a scepticism as to the inherent fatality of acute inflammation when left to run its course.

We cannot give to this temper of mind the praise of rational doubt. We regard faith in the power of the lancet over the early stage of acute, unembarrassed inflammation, as the test of a medical man's soundness of judgment and fitness for the discharge of the trust reposed in him by his patients. And judging of the future from the past, we feel assured that times will come round, and that often, when a perseverance in such doubts will prove the source of bitter repentance to those who foster them.

Next to experience, in a proper sphere, of the effects of venesection over inflammation, ranks a careful study of the facts and events of this morbid action, to preserve a right frame of opinion over so important a subject. And we augur well against the spread of the scepticism referred to, from the extended attention given at present to the phenomena and pathology of inflammatory action.

The theory of inflammation has always been an attractive subject among medical writers. The theory, however, is less important at present, and less within our reach than the facts. The work of Mr Travers, which we have placed at the head of this article, turns less upon the theory than upon the facts and events of the whole disease. The fault of all our past theories of this disease has been the too sparing amount of facts founded on. And numerous as have been the additions made of late years to our knowledge of such facts, we shall discover, on a very transient inspection, that it is the want of a few additional facts that renders it impossible to bring out a satisfactory theory of inflammation. The facts of a disease are not distinct from the theory, the theory being the facts generalized; and while a perfect theory is unattainable, the facts, when they are numerous, as those ascertained respecting inflammation are, serve nearly the same uses as a sound theory. And, in particular, the knowledge of the facts of inflammation, and that of its theory, have each the

---

* See Alison in Library of Medicine, vol. i. p. 100.

same paramount object in medicine, namely, to fix and extend
the great precepts of treatment, which experience at first sug-
gested.

The theory of inflammation, defective as it may still seem on
a superficial view, is already more complete than that of any
other extensive kind of morbid action. It is already quite abreast
of the physiology of the functions involved in the disease, and
beyond that it plainly cannot pass. Physiologists have not yet
settled the relative shares taken by the heart, the arterial trunks,
and the capillaries, nor the ordinary influences operating on these
last vessels, in the transmission of the blood during health; or
the facts, in so far as inflammation itself is in question, are nearly
all already ascertained, and prepared to be incorporated with
whatever principle physiology shall point out as apportioning the
moving forces of the blood among the agents concerned.

The discussion so long agitated, whether the vessels of the
inflamed part be in a state of augmented or enfeebled action, may
now be discarded as having served its turn. The terms of this
question are not precise enough—not sufficiently square with
the facts known respecting the state of the capillaries of an in-
flamed part, to admit of an answer in the negative or affirmative,
as regards increased or weakened action.

As the work which has suggested these reflections has for its
chief object the exposition of the facts of inflammation, we pro-
pose, before going farther into the subject, to endeavour to ex-
hibit, in the form of distinct propositions, a connected view of
what appear to us the most important facts which have been
authenticated in the pathology of inflammation.

1. That there is no increase in the rapidity of the blood's
motion through the capillaries adjacent to the axis of an inflamed
part, except for a short period at the very commencement of the
disease.

2. That the diameter of the same capillaries is diminished
during the time that the more rapid motion continues.

3. That in those capillaries adjacent to the axis of the affected
part, as soon as the inflammatory action is established, there is
either a very slow motion or a total stagnation of the blood.

4. That the slow motion or stagnation in the capillaries near
the axis is attended with a considerable dilatation, or increase in
their diameter.

5. That in the capillaries at the periphery of the inflamed

part, the blood flows, during the continuance of the disease, with unusual rapidity, and that in the mean time the diameter of these capillaries is diminished.

6. That the period which elapses between the commencement of the temporary acceleration of the blood in the capillaries adjacent to the axis of inflammation, and its retardation or stagnation in the same, varies from a few minutes to several hours.

7. That in the rise of the inflammation, the blood in the central capillaries oscillates, or to some extent flows backwards and forwards, before it finally stops.

8. That this oscillation of the blood, or its forward and backward motion in the central capillaries, soon after the first commencement of inflammation, is synchronous with the action of the heart.

9. That no entire blood or blood-corpuscles escape, unless a breach of continuity in the enlarged capillaries somewhere occur ; that even the minutest extremities of the capillary vessels are closed, and effuse their contents through their walls, by which the entire blood-corpuscles cannot pass, but only the serum, lymph, or liquor sanguinis.

10. That the several conditions of absolute stagnation, slow motion, oscillation, and rapid motion of the blood, are seen at the same time, on examining the inflamed area from its central axis to its peripheral boundary.

11. That coincidently with the slow motion or stagnation of the blood in the central capillaries, its vesicular part or corpuscles, which in health move in the axis of the vessels without touching their sides, separate from the liquor sanguinis, concrete into masses, and adhere to the inner surface of the walls, so as to impede all motion.

12. That even after inflammation has advanced thus far— that is, to the enlargement of the capillaries—the stagnation, slow motion, oscillation, and rapid motion in the capillaries, extending from the axis outwards, and the separation of the blood-corpuscles from the liquor sanguinis, their concretion into masses, and adhesion to the walls of the containing vessels, the motion of the blood may slowly return to its healthy state, without any exudation of liquor sanguinis, hemorrhage, or even effusion of serum.

13. But when things have come into the state referred to, that liquor sanguinis, that is, blood freed from the corpuscles only, most commonly exudes.

14. And that this liquor sanguinis, separating after exudation into serum and coagulable lymph, affords these well-known most usual products of inflammation.

15. Further, when the stagnation is considerable, that the fibrine of the liquor sanguinis concretes on the inner walls of the capillaries, small arteries, and venous radicles, as well as on the adjacent free surfaces, or in the interstices of the affected parenchyma.

16. That by this concretion of fibrine within the vessels, the stagnation is rendered more complete, extensive, and permanent; and hence that total failure of nutrition in the part or gangrene is threatened.

17. That the repulsion between the red corpuscles and the liquor sanguinis during inflammation is apparent even in the blood taken from a vein, giving rise to the buffy coat, to which there is a stronger tendency, after an inflammation has continued some time, than at its commencement.

18. That when the effused coagulable lymph, that is, the fibrine of the liquor sanguinis, becomes organized, as in the case of adhesion between two free surfaces, or of the thickening of a membrane, it is by the agency of the red corpuscles that new vessels are formed.

19. That as stagnation begins to cease in the dilated capillaries, and motion comes to be recovered, separation of the concreted red corpuscles takes place, and oscillations or slight movements backward and forward arise, by which single blood-corpuscles are projected through the ruptured walls of the capillaries into the adjacent concreted lymph; that the tracks thus formed gradually pass into loops and arches by the concurrence of corpuscles projected from different points, which become vessels, and quickly receive files of blood-corpuscles from the adjacent old capillaries, in which the blood is recovering its motion.

20. That the granulations in wounds and the pyogenic membrane in abscesses are organized in concrete coagulable lymph on the same general plan; while the part so organized exudes or secretes pus, or if not pus, the fluid material out of which pus forms; and it may be that in other instances of suppuration, organized coagulable lymph performs a similar office.

21. That ulceration is the result of decomposition or absorption, when that is not balanced by the activity of nutrition in the new texture.

22. That the artery feeding an inflamed part and the parts

immediately adjacent, beats more strongly than in health, while in a given time a greater quantity of blood, even by three or four times, is transmitted through it, as well as by its corresponding vein.

23. That this artery and this vein may generally be discovered by the touch to be more distended with blood than usual.

24. That though an increase in the force and frequency of the heart's action be not absolutely essential to inflammation, yet that it is evidently a part of its phenomena in every case in which the disease is rapid in its progress or extensive in its seat.

25. And that the stroke of the pulse in the radial artery, most characteristic of the presence of unembarrassed inflammation, " seems as if it were produced by a number of detached globules passing in succession through the artery."*

26. That the severity of the symptoms in some external inflammations, as gout, whitloe, and the like, may be relieved, and the attack even cured, by compression of the artery supplying the part.†

27. That whatever tends in the early stage to diminish the fulness of the vessels in the region of the inflamed part, and the general momentum of the mass of the blood, and when the case is severe, free venesection in particular, has manifestly a great power to prevent the effusion of the liquor sanguinis and the other events of inflammation, by assisting to restore the circulation of the part to its natural state.

28. That nothing so clearly shows this as the well-known effect of excessive venesection to interrupt the progress of the healing process in the case of wounds and other injuries.

Such, then, are some of the facts, the generalization of which should constitute a theory of inflammation. A perfect theory should in the first place connect the causes of inflammation with the acts which represent the first stage, and then the first stage with the subsequent progress of the disease.

The kind of explanation which past experience in the science of life entitles us to expect, by the cultivation of this subject, is not a reference of the secret workings of the stream of life, in its capillary channels, when inflammation has sprung up, to the same head exclusively with any modes of action known among

---

* See Parry, Elements of Pathology and Therapeutics, p. 56.

† Parry, Memoirs of the Medical Society of London, vol. iii. p. 77 ; also Kellie, Medical Effects of Compression by the Tourniquet.

mechanical or chemical phenomena, or in any part of purely physical nature. The ground on which the explanation sought must rest cannot be any thing else but principles discovered in the living body itself. Or we obtain an explanation of a particular act of the living body, whether healthy or morbid, when that act is shown to be a special instance of the operation of laws before established by the generalization of facts observed in the animal economy in health or disease.

While, however, the expectation of reducing the phenomena of inflammation to any purely physical laws, is plainly chimerical; still it is not to be forgotten that mechanical principles must operate in a disease, the very essence of which is an extensive disturbance of the circulation of the blood. In the circulation the greatest share of the powers concerned is purely mechanical. And therefore no theory can be satisfactory, which does not show how much of the process can be ascribed to mechanical causes, at the same time that the claims of the purely vital forces are rightly vindicated. On this point we quote the following passage from the first chapter of the work before us, which Mr Travers entitles Preliminaries :—

" Most of the theories of inflammation are based upon the fact of an obstruction to the passage of the blood, whatever be the cause, real or supposed, of such obstruction. Some have represented this remora as mechanical, others as chemical, others again as a nervous phenomenon. To constitute inflammation it must be all or neither; for the mechanical, chemical, and vital properties are all implicated and altered by inflammation." P. 30.

Under the head of preliminaries falls another question which some are fond of debating, namely, whether the healing process be a process of inflammation. Mr Travers argues against the idea maintained by the late Dr Macartney and some other eminent authorities, who refuse to recognise the healing process as an inflammation. To us the question appears to be a dispute about words. It is at present at least merely a question whether the word inflammation shall have a larger or smaller extent of signification. The larger use of the term seems warrantable, because the facts ascertained correspond with the idea that the healing process, and what is called by contrast spontaneous inflammation, are identical in character.

The name which Mr Travers has bestowed on his work, The Physiology of Inflammation and the Healing Process, suggests another and very important view of this point. Why the physiology of inflammation? one might say. What has physiology to do with inflammation? What is pathology, if inflammation

be not a part of pathology? In one sense Mr Travers might reply, Physiology, as standing in contrast to physical science, and exhibiting the laws of living nature under all possible circumstances, must include pathology. But, doubtless, what led Mr Travers to adopt for his work the title Physiology of Inflammation, was the influence of the Hunterian views of inflammation over his thoughts,—those views which represent inflammation as an act or suite of acts designed to serve a purpose in the animal economy—a physiological provision without which death would result from the slightest accidents, while, during its shortened span, the body would be covered at innumerable points with raw and irritable sores.

According to the Hunterian views, the susceptibility of inflammation in living parts is the reparative power; inflammation is one of the offices of life—an occasional function called into activity when injury is inflicted. Such is the normal character of inflammation. But, like every function of the living body, it is liable to abnormal states, and these abnormal states are true states of disease.

But besides bearing on the question whether the healing process be a process of inflammation, the view just taken may be used as a method of investigating the phenomena of inflammation. We are not prepared to affirm this to be the justest light in which the nature of inflammation can be investigated. Nor can we deny the tendency of this kind of analysis to lead into some errors in pathology. But when a due regard is paid to facts, and a proper discretion exercised over the inferences from them, we look on this mode of investigation as perfectly sound, and of a kind to bring out some parts of the process which, by any other mode of inquiry, might escape observation.

The grand difficulty in constructing a proper theory of inflammation undoubtedly is, to connect the causes with the phenomena which first arise, or with the dilatation of the capillaries and the stagnation of the blood. In the production of these, the first phenomena, it seems to be impossible to dispense with the agency of the nervous system. The act on which these phenomena depend must be either in the affected capillaries themselves, or in the contained blood, or in both. For the dilated vessels must still be subject to the whole momentum of the mass of the blood, there being no obstacle interposed between them and that mass to intercept the effect of its momentum. The contents, therefore, of the dilated capillaries, when stagnant, are not stagnant

H

because no longer pressed forward by the momentum of the blood between them and the heart, but because that momentum is insufficient to overcome their present inertia. It seems certain that nervous filaments are supplied to the coats of the capillaries ; and there is but one great law of nervous action, namely, that impressions made on the extremities of certain nervous filaments are succeeded by influences transmitted from the central organs, or the ganglionic centres, by which changes on the mechanical state of distant parts are brought about. It is therefore, at least, a probable inference, that when the cause of inflammation acts on the part to be affected, the nerves give origin to those changes which constitute the first phenomena. The conclusion is here brought out without reference to final causes, or to the Hunterian method of investigation. But it would be easy to show that that method, though it could not teach us that the capillaries are supplied with nerves, might in so far lead us to the same conclusion, by pointing out that a process, involving complex purposes of design, must necessarily be dependent, like acts of instinct, on nerves, thereby inducing us to search for the nerves, if these had not been before discovered.

What the nature of the change wrought by the nerves is, we do not at present propose to inquire. The subject is not so immediately suggested by the work before us as to warrant our entering on it at sufficient length. And we fear pathology is still far from the point of fixed knowledge on this subject.

But there are several important subjects of inquiry towards a complete theory of inflammation, which should engage the attention of pathologists, or rather of physiologists, even while the nature and mode of production of the earliest phenomena are incomplete. Thus, it may be considered, if the distention of the capillaries and the accumulation of their contents have an object,—if the exudation of liquor sanguinis and then of red corpuscles be the final purpose of this dilatation and stagnation, —and how far this state agrees with the other known states of vascular turgescence which precede increased deposition from the blood,—whether the mechanical force here manifestly applied through the momentum of the mass of the blood to the dilated vessels and their contents be the sole cause of the exudation, or only an assistance by which the effect of a vital act of transmission is increased.

Again, it has to be determined how far the important properties of tonicity and elasticity, first of the arterial trunk

feeding the affected part, and next of the arterial system at large, are acted on by the local obstruction. By what steps does the artery of the inflamed part become distended and convey more blood than usual? Is this artery brought more into the condition of a rigid tube than in its healthy state?—or does it still expand under the stroke of the ventricle, and is its elasticity increased proportionately with its distention, so as to enable it still to contract on its contents? Or is the strength of its pulse independent of any actual expansion under the stroke of the heart, and is the blood transmitted through it by the direct impulse of the heart, without any contraction of its own walls? The whole subject of the motion of fluids through tubes with elastic walls requires revision. The common comparison of the elasticity of the arteries to that of the air in the air-vessel of a fire-engine is wholly deceptive,—the cases are not parallel.

Again, the natural motion of the blood in the capillaries requires to be better understood. Our facts are too much drawn from cold-blooded animals; the circulation of the Bat's wing is too little studied. The proportion of blood in the capillary system and the rate of its motion have hardly been computed. The mere inspection of its movement in the field of the microscope is quite fallacious,—the microscope multiplies the rate of motion in the same proportion in which it magnifies the moving bodies and the surfaces over which they move.

Moreover, we cannot tell whether the red corpuscles keep the middle of the stream by a principle of physics, or as the effect of vital influence. In short, we have not yet studied the physical laws applicable to the motion of such organic fluids as the blood, which are not true fluids, but fluids loaded with solid matter.

Further, we know by Poiseuille's experiments that the momentum of the blood is much the same all over the arterial trunks and even in the small arteries; but what do we know of its momentum in the capillaries?

But we might go on to weariness with the enumeration of the points bearing on the theory of the phenomena of inflammation which still require examination. We propose, therefore, at once to sum up this article with some account of what the work before us contains, and with some further extracts, to show the style in which Mr Travers treats the subject.

The work is not of great extent. It is a duodecimo volume,

consisting of twelve chapters besides an introduction, in all occupying little more than 200 pages. His first chapter turns on preliminaries, from which we have already quoted one passage. The second chapter contains his microscopic observations on the effects, in the web of the frog's foot, resulting from the application of solution of common salt, of ammonia, and from an incised wound. In these observations he was assisted by Professor Owen. In the seventh chapter he has given a table of the preparations—now in the Museum of the Royal College of Surgeons of England — made by the late Dr Todd of Brighton, to illustrate the progressive stages of the healing process. And in the ninth chapter, he has given the results of a repetition of Dr Todd's experiments by himself, with the assistance of the well-known microscopist Mr Quekett; with this difference, that, instead of following Dr Todd's practice of killing a frog day after day to preserve a preparation of the appearance of the wounds at successive stages, he permitted each frog to live, to show, in the same individual, the successive stages of the healing process. We extract some passages from the digest of the phenomena developed in the healing process, with which the chapter terminates :—

" Stasis or actual arrest of the circulation is a direct effect of local irritation, more or less persistent according to the degree or shock. Thus, if unattended by injury to structure, recovery from it restores the previous condition, whether inflammation be set up or not. Its local extent, like its duration, will be according to the amount of the irritation. The circulation is oscillatory at the verge of the stasis ; beyond this it is preternaturally slow ; and yet farther from the stationary centre it is, or appears to be, somewhat brisker than natural. The suddenness and completeness of the stasis determine the acuteness of the inflammation ; it is slowly formed and imperfect in what are termed congestive inflammations.

" Contingent upon the stasis is the effusion of serum, or of the liquor sanguinis, the one or the other according to the nature of the injury inflicted, whether of function simply or of structure. If serum only be effused, the inflammation, if any be present, admits of perfect resolution ; not so if the effusion be of the liquor sanguinis, holding the fibrine of the blood in solution. This is the distinction between the effusions of shock and of lesion, the nervous and vascular, the inflammatory and non-inflammatory œdema. The second results from a more considerable and prolonged action than the first, if both be the effects of inflammation ; but whereas the aqueous effusion is often unattended by inflammation, the fibrinous effusion is characteristic and proper to it, whether with or without primary breach of texture."

" The fibrine effused in a state of solution in the liquor sanguinis only becomes susceptible of organization, i. e. capable of permanent incorporation with the living solid, when separated from the other constituents of the

blood. It is incapable of organization if effused in combination with the blood-corpuscles, as in extravasation or hemorrhage." Pp. 160-162.

" The effusion of the liquor sanguinis from the arterial capillaries is the first change consequent upon inflammation, either with or without breach ; it is in either case limited to the extreme verge of vascular action, or the boundary line of its arrest (complete stasis). In the act of coagulation upon the face and sides of the wound, the contained fibrine separates from the serous portion of the liquor sanguinis, and becomes a crust or membranaceous stratum covering in the wound at all points, the sections of blood-vessels, nerves, absorbents, &c. This, then, forms the intermedium of vascular communication by anastomosis in cases of union by adhesion. It is an effusion entirely distinct from and subsequent to extravasation of blood, and does not take place until after the act of inflammation is established, when the coloured coagulum becomes detached." Pp. 162, 163.

" The second act in the healing process is the separation of the lymph particle from the blood within the vessel. This is not seen until after some time has elapsed, for it is not an immediate consequence of the stasis, which may and does continually happen without this separation, or any effusion of lymph, as in simple irritation or inflammation of a sound texture without deposit." Pp. 163, 164.

These passages, we should remark, are not quite continuous with each other ; neither are those which follow.

" The elaboration of the organizable lymph appears to become perfected as it advances, confirming the practical observation, that wounds which heal slow heal sound. It is quite a mistake to suppose that, in wounds with loss of substance, the effusion of organizable fibrine constitutes the permanent material of the new solid. The first deposit effused with the liquor sanguinis is an amorphous exudation, and presents no such regular figure and arrangement as the lymph particle which has been separated within the vessel before deposit. They are, in truth, different in this respect : the first, or that which forms immediately on the receipt of an injury, and serves for the intermedium of organization in a close apposition of surfaces (being separated from the liquor sanguinis with which it is effused), would not serve as a base for the new solid ; it is soon absorbed, being only a temporary bond or adhesive layer in harmony with the parts, though serving the important purpose of consolidation by anastomosis of the contiguous vessels of opposite sides, or union by the first intention ; the second is not called for in mere divisions of substance, and is not ready if it were ; it requires a higher and long-continued inflammatory action ; it is a permanent, not a provisional or temporary mean of reparation,—a substantial addition of structure, not a mere conjunction of parts." P. 166.

What Mr T. terms the lymph particle, is the colourless corpuscle, concerning which so much discrepancy of opinion has of late existed. These colourless corpuscles exist at all times in the blood, but accumulate, under inflammation, in the capillaries, in which the blood moves slowly, or has begun to stagnate. We have given Mr T.'s views on the subject of the part assigned to the lymph particle in the healing process ; but our space does

not permit us to enter at present upon an examination of his opinion.

Two quotations more must conclude our notice of this chapter.

" To conclude : the inflammatory exudations are,—1st, of serum ; 2dly, of liquor sanguinis ; 3dly, of fibrine, or the material of new structure ; and the fabricator of the new vessel is the blood-corpuscle." P. 169.

" The temporary stasis seems to be necessary to the exudation of liquor sanguinis, its continuance to that of the separated lymph particle ; and not less the graduated impulse of the returning circulation to the elimination of the blood-corpuscle in single globules for the fabrication of new vessels ; for if it were in mass (hemorrhage) it would destroy instead of promoting organization." P. 169.

Besides the chapters already referred to, there is one on the local symptoms of inflammation, one on its constitutional symptoms, two on the processes of inflammation, effusion, and adhesion, one on granulations and pus, one on ulcerative inflammation, one on cicatrization, and the last on gangrenous inflammation and gangrene. These chapters contain throughout many observations, which, did our limits permit, we would gladly quote for the benefit of our readers. We must, however, refer them to the book itself.

It is impossible for a man who, like Mr Travers, is at once profoundly read, an original thinker, an industrious experimenter, and a practical surgeon, to write a book on inflammation which should not be of the highest interest. Yet we cannot promise that it will become very popular with the profession. It is not a book which one who runs may read. It requires to be studied to be understood. Amidst a great deal of clear statement and methodical dealing with the subject, there are occasional obscurities very discouraging to the reader. But we are sure if the book be read from end to end, no one will fail to carry away with him all that the author wishes to inculcate.

The work, however, does not the less merit attention, when we consider the deservedly high reputation of the author, that some of his views do not coincide with those generally taught.

There is no part of the whole subject of inflammation on which there exists so much difficulty and obscurity as the nature of suppuration and the origin of pus. And we have accordingly been much interested by the chapter before referred to on granulation, pus, and suppurative inflammation. And yet we do not find it easy to pronounce a positive opinion on his views.

" The granulation is a mesh of the terminal loops of capillary pencils, formed, as has been described, under the adhesive inflammation in the

newly deposited fibrinous membrane coating the surface of the breach or cavity in the original solid." P. 110. " The aspect of the suppurating membrane also varies to such extent as scarcely to exhibit, in some circumstances and situations, the granular form, *e. g.* upon the walls of abscesses and upon the free surfaces of mucous and serous membranes ; but the fibrinous bed and the capillary loop of new formation, and a corresponding alteration of the pus-secreting surface from its normal state, will always be detected upon careful examination, being essential elements of the suppurative process." P. 111.

It will strike every one that what he says here is most doubtful as respects the suppurative inflammation of mucous membranes. It is quite true, as Dr Hodgkin says, " that when the mucous membrane has been for some time pouring out a more or less puriform secretion, its surface, although no abrasion or ulceration may have taken place, becomes irregular, from an infinite number of rounded elevations or granulations, which are generally extremely minute, but bear a close resemblance to those which are formed on the surface of a healing ulcer ;"* but still this does not carry conviction that pus is never thrown out by the mucous surface, without the previous deposit of coagulable lymph. Moreover, we find that Mr Travers modifies the view exhibited in the passage before quoted by some subsequent passages. The first passage, however, which we shall cite from his work, rather goes beyond that above referred to.

" If, upon careful inspection of the free surface of mucous membrane secreting pus, no appearance exactly resembling granulation can be observed, the membrane is altered, *i. e.* raised and thickened by a deposit of hypervascular lymph in the interstitial or subjacent tissue."

How much the following passage, nearer the end of the book, modifies the two which have been already cited on this subject, will be at once apparent.

" The open-mouthed follicles of the mucous membrane are equivalent to granulations, *i. e.* equally secrete pus, in lieu of their proper secretion under inflammation. This shows that the especial form of granulation is not indispensable to the secretion, though it is a form which the effused fibrine more or less affects, when suppuration is set up." P. 171.

We suspect that the last-quoted passage gives up the doctrine maintained in the previous part of the work, namely, that pus is a secretion performed by a temporary secreting apparatus produced by effused lymph, and that the granulation of open surfaces is the type of that peculiar gland. Nevertheless, the view taken by Mr Travers on the subject of the production of

---

* Hodgkin's Lectures on Serous and Mucous Membranes, vol. ii. p. 28.

pus, deserves to be tried by farther experience before it is condemned.

We shall close this article with a few short extracts from the chapter " On the effects of inflammation on the system," which, representing the ideas of a man of so great judgment and experience as Mr Travers on the treatment of inflammation, cannot but be acceptable to our readers.

" In the fever attending inflammation of the vital organs and their involucra and chambers, the free detraction of blood is one of the most important points of treatment, and this whether inflammation results from injury or other causes. The life of the patient seems, in a great measure, contingent upon his power to bear, and his susceptibility of relief from the loss of blood—conditions which are not at variance—at first in larger and afterwards in smaller quantities." P. 57.

" In inflammations, however originating, whether from injury or diseased habit, affecting the extremities, general bloodletting is seldom advisable, or even practicable with safety. From the part blood is taken, by various methods, with very great advantage in such cases." P. 57.

" In visceral inflammation, venesection is indicated and warranted to the utmost extent that the powers of life will bear; for here the mass of blood is so altered and spoiled for its proper healthy purposes, by the direct implication of the blood-making and blood-preparing organs in the disease, that relieving the system of its presence to the extent that can be borne, is the main resource we possess for its preservation." P. 58.

We fully agree with Mr Travers as to the imperative necessity for the detraction of blood " to the utmost extent that the powers of life will bear," but we hesitate to subscribe to the reason assigned in the above passage for the practice.

" There are two false doctrines concerning blood-letting for inflammation, which cannot be too strongly condemned: the first anticipatory bloodletting, by which I mean, the large and repeated detraction of blood before inflammation, being considered inevitable, has actually manifested itself— on the hypothesis of starving the action, and thus rendering it tractable— which is a direct attack on the vitality, and fatally perverts the action, if it do not destroy the resisting powers of the system. The second, continuing the employment of the lancet so long as the last drawn blood exhibits the signs of inflammation, which, if drained to the last drop it would do; or in other words, not reflecting that there is a line beyond which the practice becomes destructive, instead of remedial; and that there are many inflammations which do not admit of arrest by depletion, and upon which other modes of treatment are efficient for this end, even though not an ounce of blood be drawn." P. 59.

With these remarks and quotations, we leave this book in the hands of our readers; to such of them as have leisure for the study of so small a volume, we recommend it as full not only of descriptive knowledge, but also of abundant food for speculative reflection.

PART III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

MEDICINE at the present time appears to stand upon a very doubtful basis; its position being marked by a great want of knowledge concerning the *nature* of disease. Correctly speaking, medicine has not yet become a science. If this statement be untrue, why is it that doctrines such as those of homœopathy and hydropathy, so opposed as they are to the received doctrines of our profession, are permitted to pursue their present progressive course unchallenged? We say unchallenged, because it appears to us that all which has been written against these and other crude doctrines has not exposed in any one point the real nature of such errors. Why is this the case? It is because medicine is not a branch of knowledge regulated and controlled by known general laws. If a person of fancy and genius gave forth to the world, with great eloquence and reasoning, a work in which he endeavoured to prove the correctness of the old belief that the earth is the centre of the universe, and at rest, and that the celestial orbs must all move in perfect circles and with a uniform motion, would not such a work be proved to be erroneous from the very nature of things? And would not this proof be capable of being made so satisfactory to the most common mind, as to make that mind scoff at the powerful reasoning and great eloquence by which the newly resuscitated notions had been dressed up? We again ask the question, Why is this? It is because the science of astronomy is regulated and controlled by known general principles. The physician is at the present time in the humiliating position of the boy in the theatre, who sees the scenery on the stage continually shifted, and with the shiftings differences in appearance, but who is entirely ignorant of the mechanism or mode by which these several changes are effected. In the same position stands the physician;—he enters the patient's room,—he watches the countenance with anxious care,—he feels the pulse, and observes the tongue, and then using these signs as we do the words of a language, he becomes acquainted with the ravages that are going on within. But what does he know of these ravages? The principal parts of the catalogue may be stated to be as follows:—A certain organ is diseased—the progress of the disease is learned—an abnormal action is going on, the effect of which will probably be a complete disorganization of the organ so diseased. This is all he knows,—at least all that he knows is of this *character*. He is acquainted with the effects merely; the nature—the mechanism by which these effects have been produced, are to him, at present at least, as a sealed book. Thus it is that many baneful and truly fantastic hypotheses reign rampant for a while, until some new favourite of the same type steps in and knocks the now friendless theory from its former high position to rest in forgetfulness. Medicine as a science cannot now be advanced one step by mere observation at the bedside, or by coarse anatomical dissections made in a large hall with large knives. Medicine can only now be advanced through the aid of the physiological anatomist and the organic chemist. On

them, in the present day, depends the *true* advance of medicine. The former must, by careful observation and mechanical analysis of the phenomena of life and organized matter, acquaint us with the *forms* which nature gives to matter while producing beings, while developing them, and while retaining them in health. And the latter must, by his analytical and synthetical processes, reveal to us the laws which regulate them in the producing of those various forms with which the physiological anatomist has made us acquainted. For the fulfilment of these noble objects, men are required whose whole hearts are devoted to medicine as a science.

We give these few remarks in our first number for the purpose of making our readers acquainted with the objects which we shall always have in view in the physiological department of the Periscope, namely, to endeavour to bring to bear upon the nature of disease all physiological, organic, chemical, and microscopic discoveries.

On the Structure, Relations, and Functions of the Nervous System.

THERE is contained in the last published part of the Philosophical Transactions of the Royal Society of London a very admirable paper, by Mr Newport, upon the structure and functions of the nervous system, and on the existence of a complete circulation of the blood in vessels, in some of the articulata. We intend to give here some extracts from that portion of the paper which relates to the nervous system, as it illustrates the functions of a certain portion of that system in man.

" In all the articulata two modes of development of the nervous system are in operation in the same animal :—first, that of *growth*, or simple extension and enlargement of each individual part ; next, that of *aggregation*, or the union of two or more parts to form particular divisions or regions of the body. The brain of the myriapod or centipede is formed by the aggregation of separate ganglia placed above the œsophagus. The first pair of ganglia are always the smallest, and give origin on their front to the nerves of the antennæ ; the second pair immediately behind them constitute the organs of volition, and represent the brain of the vertebrata. They are attached at their under and external surface to the central nervous cord by two bands of nervous matter, which are prolonged downwards on each side of the pharynx, and constitute the *crura cerebri*."

"*Structure of the Cord.*—The cord is a compound structure, composed, first, of two distinct longitudinal columns of fibres, which are quite distinct from each other, although closely proximating together ; secondly, of fibres that run *transversely* through the cord ; and, thirdly, of fibres that run longitudinally in *part* of their course at the *side* of the cord, and enter into the composition of *all* the nerves from the ganglia. These fibres I shall designate the fibres of reinforcement of the cord."

" *The Superior Longitudinal or Aganglionic Set of Fibres.*—These fibres I formerly described as the *motor tract*. The function of volition seems still to be accorded to them by Valentin, Carpenter, and Baly. They extend as a separate fasciculus along the upper surface of the cord. On a cursory inspection, this tract of nervous matter does not appear to give off any branches, but seems to pursue its course uninterruptedly along the whole length of the cord. It does not indeed give off filaments to the nerves from a ganglion while passing over that swelling, but immediately the fasciculus has passed over the ganglion, it gives off filaments that proceed to the nerves of the next ganglion."

" *Inferior Longitudinal or Ganglionic Set of Fibres of the Cord.*—This portion of the cord affords many interesting considerations. It is placed exactly as in insects, on the under surface. It is formed of a longitudinal series of fibres, like the upper tract, from which it is divided by some of the fibres that pass transversely through the cord. There is one fact of great importance as regards this ganglionic series of fibres. Almost the whole of the fibres of which it is composed are traceable directly through each enlargement of the cord, which they mainly assist to form. At the interior part of each enlargement the diameter of each fibre, or fasciculus of fibres, appears to be slightly increased, and its structure becomes more softened and delicate."

" These are the structures to which I formerly assigned the function of voluntary motion and sensation, and to which I am still inclined to believe they minister, since the fibres of which both are composed are *traceable* to the crura and brain."

" Those fibres of the cord which seem to be independent of the sets just described, and which do not appear to have any direct communication with the great seat of sensation and volition, the brain, are of two kinds, which may justly be regarded as *involuntary* in their functions. The first of these are the *commissural* fibres which pass through the ganglia ; and the second, or those which have hitherto been undescribed, and which form the sides of the cord in the interspace between the ganglia, *the fibres of reinforcement of the cord.*"

" *The Fibres of Reinforcement of the Cord.*—These fibres form the lateral portions of the whole nervous cord of the body, and enter into the composition of all the nerves. They constitute, as it were, circles of nervous communication between two nerves that originate from the cord at a greater or less distance, and form part of the cord in the interval between these nerves, and bear the same relation to the segments individually which the cord itself does to the whole body. They form a part of the nervous trunks which come off from its aganglionic tract, as well as of those which proceed from the ganglionic tract. In this manner these fibres of reinforcement connect all the nerves of the cord on one side of the body, as the corresponding fibres do on the opposite side. They form as it were double, treble, or quadruple circles, one within the other. Thus the fibres that pass inwards along one nerve, may proceed along the cord to pass outwards again on the front of a second, a third, or a fourth, thus linking the segments in one continued series of nervous communications, independent of the brain. But these communications exist only between nerves on the same side of the body, and not between those on the opposite. The *commissural* nerves connect the opposite sides of each individual segment, as those of *reinforcement* do the same sides of two separate segments."

" Every nerve from a ganglionic enlargement of the cord is thus composed of *four sets* of fibres, an upper and an under one, which communicate with the cephalic ganglia ; a transverse or *commissural*, that communicates only with the corresponding nerves on the *opposite* side of the body ; and a lateral set, that communicates only with the nerves on the *same* side of the body. The functions of the two last-mentioned sets must be regarded only as reflex ; entirely independent of sensation, but capable of being excited into action by external causes."

" The existence of these lateral fibres in the cord may now fully explain the reflected movement of parts anterior or posterior to an irritated limb on the same side of the body, as the commissural ones do the movements

of parts on the side opposite to that which is irritated. The presence of these fibres in the cord of insects I had long suspected, from the curved direction of the fibres that bound the ganglia, and from that of the origins of the nerves from the aganglionic tract, as figured in my former paper; and although I had communicated this opinion to a friend several years ago, I have never until recently been able to satisfy myself of its correctness."

"This uncertainty of the existence of any structure in the cord that seemed sufficient to explain the reflected movements on the same side of the body, independent of the brain and the nerves of volition and sensation, long obliged me to withhold my assent to the doctrines now received respecting these phenomena."

"Although the fibres that pass transversely through ganglia might explain the effect produced on one side of the body by the irritation of a corresponding part on the other, there seemed no anatomical structure to account for the movements of distant parts, anterior or posterior to a given point, on the same side, if the doctrine long received, that each fibre is endowed with but one special function, were correct. Now, therefore, that we find an anatomical structure in the cord that seems to account for these phenomena, it ought in justice to be stated, that Dr Hall, to whom is due the high credit of collecting, comparing, and arranging in one system numerous facts connected with the reflected movements of animals, as observed by Whytt, Blane, and others, and also by himself,—adopting the principle established by our distinguished physiologist, Sir Charles Bell, that every nervous fibre is continued unbroken from its origin to its termination, and is capable of ministering only to one special function,—conceived the necessity for the existence of special nerves for the reflected movements."

(*To be continued.*)

SURGERY.

(HOLSCHER'S HANNOVERSCHE ANNALEN.)

Memoir on the Diagnosis of Cancer of the Eyelids. By Dr CANSTATT of Ansbach (now Professor at Erlangen).

A SERIES of observations collected at the Ophthalmic Clinic of M. Sichel, whose assistant he was for a considerable time, has led Dr Ch. Canstatt to the following conclusions on the diagnosis of cancer of the eyelids.

Progress of the Disease.—The progress of this disease presents numerous varieties; but it appears that its course is much slower in the eyelids than in any other region of the body. Often years elapse without the scirrhus gaining either in breadth or in depth. However, no means either pharmaceutical or surgical has the power of repressing or checking it. On the contrary, every attempt of this kind ends in hastening the transformation of scirrhus into open cancer. The stationary state of the ulcers of the lids has been already pointed out by Jacob as a sign of their cancerous nature.

Original Seat of Cancer of the Eyelids.—Most frequently the original seat is in the palpebral conjunctiva, and from thence it attacks the skin on the other side of the palpebral edge. Sometimes the skin is affected first. The affection may be considered as glandular scirrhus when it commences in the lachrymal caruncle.

The frequency of cancerous ulcerations at the internal angle of the eye

is very remarkable. This fact is explained by the use of this angle, which serves as a receptacle for the different secretions of the conjunctiva and of the glands of the lids.

Primary Affections which give rise to Cancerous Ulcerations.—It is very rare to see a tubercular excrescence of the conjunctiva degenerate into cancer. Most commonly an ulcer, of at first a simple appearance, degenerates, either in consequence of an irritating treatment, or under the influence of an unhealthy constitution of the patient. An advanced age, want of cleanliness, or the cessation of the catamenia, exercise a well-marked influence on the modification of the character of these ulcers. The cutaneous scirrhus of the eyelid is frequently developed, as in other regions of the body, as a consequence of a tumour which only differs from an ordinary wart in the lancinating pains of which it is sometimes the seat. On this account, it is necessary to extirpate excrescences of this nature as soon as they make their appearance. The ravages of cancer of the eyelids may extend themselves in a frightful manner. Sometimes the sufferings of the patient are terminated by death, in consequence of an affection of the bones and of the membranes of the brain.

Appearance of the Cancerous Ulcer of the Eyelids.—The bottom of the ulcer, often foul, is covered by crusts which are detached spontaneously, or are torn off by the patient, and which may give rise to hemorrhages. These crusts gain insensibly in breadth whilst the ulcer becomes deeper. Often all the parts capable of carcinomatous degeneration are transformed into tubercular masses before the ulcer becomes open ; but this when once established causes the most rapid destruction. Sometimes the invasion of the neighbouring parts takes place by paroxysms of exacerbation, after the disease has been for a certain time stationary, and even when hopes of a speedy cure have been entertained. The skin is rarely inflamed far beyond the limits of the ulcer, and does not undergo any scirrhous modification. Rarely are these fungous excrescences which abound in affections of this nature, having their seat in other regions, seen to elevate themselves from the bottom of a cancerous ulcer of the eyelids. This is the more remarkable, as in the eyelids the surface of the ulcer is exposed to a continual irritation from the contact of the air and the secretions of the eye. Hemorrhage seldom complicates these ulcers, which do not furnish such a sanies and such a tainted secretion as an open cancer does in other regions of the body.

Practical Conclusions.—Every ulcer of the eyelids ought to be operated on at an early period, which presents a suspicious character, if, not yielding to rational treatment, it remains stationary or makes fresh progress. The operation, when performed in time, permits the hope of a perfect cure of cancer of the eyelids ; whilst, if temporized with, it threatens, during its existence, not only one of the most important organs, but even life itself. The opinion of M. Canstatt is conformable to that of Jacob, who declares that every therapeutic agent other than the employment of the bistoury, ought not to be applied for the treatment of cancer of the eyelids. Cauterization, especially by means of the arsenical paste, which is justly recommended for the treatment of cutaneous cancer in other parts, as the nose, lips, &c., ought not to be practised, except in an extremely cautious manner, in the case of cancer of the eyelids. Not only does the danger of its secondary action upon the eye contra-indicate its employment, but besides, experience does not appear to have verified in this case the success due to it in the same affection when it has its seat in other parts of the body.

Annales d'Oculistique, Fevrier 1844.

MATERIA MEDICA AND DIETETICS.

On the Preparations of Iron recently introduced into Practice.

THE preparations of iron are most deservedly in high esteem with practical medical men. The reputation of these preparations, in the treatment of diseases, has probably varied less for a long time past than that of most remedies of similar pretensions. There are, indeed, some indications of their having been held for a time, since the commencement of this century, in a degree of suspicion with a part at least of the profession. And this suspicion seems to have arisen from their well-known power of acting as a stimulus to the vascular system—of increasing the force and frequency of the heart's action,—a property which was naturally enough thought to be incompatible with their use in any chronic disease, where by possibility there might be inflammatory action secretly going on.

But it seems now well established that there are chronic diseases attended with some degree of the inflammatory process, for example, chronic inflammation of the mucous membranes, chronic diarrhœa, chronic dysentery, enlargement of the liver or spleen, and ulcerations of the surface, in which those conditions are present that determine the utility of the preparations of iron. Besides, it was more the practice some years back than it is now to describe morbid alterations of tissue, such as so often characterize chronic diseases, to inflammatory action. And if the recent introduction of the term *diseased nutrition*, to represent a part of the morbid agency in the production of textural alterations, before referred to inflammatory action, has been of no other use, it has at least left us more free to observe the effects of remedies on many chronic diseases, without the bias given to the mind by the ideas which inflammation cannot but call up.

As respects the preparations of iron, however, in diseases generally, the risk at present is, from the universal attention paid to them, that their use will be carried beyond just bounds, rather than that they shall be employed less than they deserve.

And yet the indications for the use of iron in diseases have always been tolerably simple, and perhaps it is not premature to pronounce that these are already becoming still more simple than before. We refer to the exact evidence recently brought forward of what has been conjectured for many years past, namely, that iron used as a remedy goes directly to the nutrition of the blood, when the blood has fallen into an impoverished state. On this subject the memoir of Andral and Gavarret is highly interesting, as well as Andral's more recent little work entitled " Hematologie."

It is hardly too speculative, when we look to the facts detailed in the memoirs just referred to, to represent the state of the system which calls for the use of iron in the following manner : The iron of the blood, in the healthy state of the system, is drawn from the organic matters containing it employed as food ; but in certain states of ill health the nutritive powers become inadequate to extract a sufficiency of iron from the ordinary food, for the maintenance of the blood in its perfect state ; while, if iron be given in the mineral state, the blood becomes restored more or less quickly to a healthy constitution. Thus, then, under this view, iron becomes an aliment rather than a medicine ; or, like common salt and water, it is an aliment from the mineral kingdom.

Hence, besides the old indications for the employment of iron drawn from the languor of the circulation, the inactivity of the respiratory acts, and the depression of the nervous system, we obtain in addition the impoverished state of the blood or the proportionate deficiency of the red

corpuscles,—a deficiency which may be ascertained with or without the use of the microscope. The same view affords a satisfactory rationale of the difference between the effects of iron as a stimulant on the living system and those of such stimulants as alcohol, opium, and the like. The latter agents, like iron, increase the force of the circulation, the activity of the respiratory acts, and the energy of the nervous system, while digestion, secretion, and absorption, participate in the general excitement, and the whole system feels a fresh tone. But these effects are short-lived; there is expended on them much of the ordinary resources destined to maintain the body in vigour for some time to come, and hence, present exhaustion must ensue. There is a collapse of the system, marked by languor of the circulation, deficiency of respiration, abatement of the healthy vigour of secretion, and depression of the muscular tone.

And the reason is, because the last-named stimulants possess little or no nutritive property. The excitement they produce is necessarily, therefore, a process of exhaustion; unless, indeed, the system has previously fallen below its healthy standard, in which case such stimulants act the part of permanent tonics, by bringing the functions of maintenance nearer to the level of healthy vigour. But the preparations of iron, under the view above referred to, not only stimulate, but at the same time supply to the blood the means of sustaining the expenditure of substance produced by their stimulus.

But enough of these generalities : we propose to give a short notice of the preparations of iron recently brought into use.

Notwithstanding the difficulty of preventing the protosalts of iron from passing spontaneously into the corresponding persalts, a very general belief has sprung up that the former are of greater utility in a medicinal point of view than the latter. It is true that the rust of iron and the old precipitated carbonate are known by long experience to be beneficial in diseases, and it is equally certain that the discovery of chemists that they are not carbonates cannot invalidate their claim to this title. Why then, it may be asked, take so much pains to exhibit iron in the form of a true carbonate, if there be no experience till of late of its utility, while there is the experience of many years in favour of the sesquioxide into which the carbonates spontaneously pass? But since it is quite possible that, while the sesquioxide is useful, the true carbonate may be more useful, let us consider on what ground of experience the latter persuasion rests. The antihectic mixture of Griffiths, represented officially by the compound mixture of iron and by the compound iron pills, has, from an early period, enjoyed a high reputation among practical men, in spite of the efforts of chemists and pharmaceutists, who rest their opinions on theory too little qualified by experience in the actual treatment of diseases, to banish it as unscientific.

It is now found that this supposed unscientific mixture is the only form in which we have any long experience of the medicinal effects of iron in the state of carbonate. And hence arises a probability that the reputation of the compound iron mixture in diseases depends on the iron being in the state of carbonate of the protoxide. It is retained in that form by the presence of sugar, which, according to the singular discovery of the German chemist Klauer, prevents the decomposition of the carbonate of the protoxide by preventing the protoxide from passing into the state of sesquioxide. The same statement applies even more forcibly to the solid form of the same combination, the compound iron pills, or Griffith's pills.

Previous to the announcement of Klauer's discovery, Dr Clark of Aberdeen had proposed to preserve the precipitated carbonate from passing into sesquioxide by avoiding any drying of it, and making it at once, after

merely squeezing it, into an electuary with sugar and aromatics. And Dr Christison had also previously observed, that the iron of this electuary had not lost its carbonic acid even when it became quite dry.

In the first English edition of the Edinburgh Pharmacopeia, advantage was taken of Klauer's discovery, and a saccharine carbonate of iron introduced. This saccharine carbonate is found to be a mixture of the carbonate, of the protoxide, and the sesquioxide. A pill of the saccharine carbonate was introduced at the same time. Many practitioners have of late adopted the use of the carbonate of iron made extemporaneously at the moment of being taken. The formulæ for this purpose contain some soluble salt of iron, with an alkaline carbonate, as the solution of the sulphate with the carbonate of soda. From 8 grains of sulphate of iron, and 10 grains of carbonate of soda in solution, an effervescing draught is obtained, containing ten grains of carbonate of iron. The tincture of the muriate is also used in the same way with an alkaline carbonate. Besides these preparations, the sulphate and the black oxide contain iron in the state of protoxide, combined in the latter with the sesquioxide. Or the London Pharmacopeia contains three preparations in which the iron is in the state of protoxide, namely, the mistura ferri composita, the pilulæ ferri compositæ, and the sulphate of iron; while the Edinburgh Pharmacopeia contains the same, with the exception of the pilulæ ferri compositæ, and has besides the saccharine carbonate, the pills of the saccharine carbonate, and the black oxide, now made by precipitation after the formula of Wöhler.

More recently it has been found that sugar has also the effect of preserving the protiodide of iron from passing into the periodide. And this discovery has been taken advantage of in the new preparation of the Edinburgh Pharmacopeia, the ferri iodidi syrupus.

The most important new officinal preparation in which the iron is in the state of sesquioxide, is the hydrated sesquioxide, termed, rather unhappily we think, by the Edinburgh College, Ferrugo. This is the substance recommended as an antidote to arsenic, and it will most probably be found to supersede the common rust and the sesquioxide formed from the precipitated carbonate.

Besides these officinal preparations, many others have been recommended of late, and some have come into use.

The following table includes those more worthy of notice :—

		Dose.
Ferri bromidum,	. . . . .	gr. iii. to gr. viii.
Pilulæ ferri bromidi,	. . . . .	gr. i. in each.
Ferri citras,	. . . . . .	gr. v. to gr. viii.
Ferri ammonio-citras,	. . . . .	gr. v. to gr. viii.
Ferri et Quinæ citras,	. . . . .	gr. iii. to gr. vi.
Aqua chalybeata (citrate of iron in water charged with carbonic acid and flavoured with aromatics),		℥ii.
Ferri potassio-citras	. . . . .	gr. v. to gr. viii.
Liquor ferri potassio-citratis.		
Ferri tinctura aurantiaca (iron filings, Seville oranges, Madeira, &c.),	. . . .	℥i. to ℥ss.
Ferri lactas,	. . . . .	gr. vi. to gr. xii. in the day.
Ferri lactatis syrupus.		
Ferri lactatis trochisci.		
Ferri ammonio-tartras,	. . . . .	gr. v. to gr. viii.
Ferri tannatis syrupus.		
Ferri confectio composita,	. . . . .	℥ss.

The bromide of iron is deliquescent and very soluble. The dose is from 3 to 8 grains. The pills are made with a *q. s.* of extract of liquorice, each containing one grain of bromide. Their use is against glandular enlargements, hypertrophy of the uterus,* &c.

The citrate and ammonio-citrate of iron have been met with in the shops for some time. The citrate is permanent in air, sparingly soluble in water, very soluble in boiling water, and the solution reddens litmus-paper. The ammonio-citrate is deliquescent, soluble in cold water, neutral to test-paper. The citrate is made by saturating a hot solution of citric acid with moist hydrated sesquioxide of iron ; and the ammonio-citrate is made by adding enough of aqua ammoniæ to the same solution to render it neutral.

The citrate of iron and quinine is made by mixing 4 parts of citrate of iron with 1 part of citrate of quinine. The citrate of quinine is made by dissolving pure quinine in a solution of citric acid.

The ammonio-citrate, as soluble, is preferable to the citrate. The dose of either is from 5 to 8 grains. The ammonio-citrate should be given in solution. The dose of the citrate of iron and quinine is from 3 to 6 grains. The form of pill answers best for this medicine. The uses of these preparations are much the same as those of the tartrate.

The aqua chalybeata, made by Bewley & Evans of Dublin, contains 13 grains of citrate of iron in 6 oz. The dose is 2 oz. two or three times a-day.

The tinctura ferri aurantiaca is contained in the Wirtemberg Pharmacopeia. It is an agreeable preparation, the dose being from one drachm to half an ounce†.

The ferri potassio-citras and its syrup are recommended by Dr Todd, and the mode of preparing them may be seen in the Lancet, 10th September 1842, p. 822.

The lactate of iron contains the protoxide. It is met with in small acicular greenish prisms, or in powder of a pale green colour. It contains 3 equivalents of water of crystallization. It is sparingly soluble, and during solution passes into a higher state of oxidation. It is made by adding iron-filings to lactic acid. The syrup and lozenges are made on the common plan. The dose of lactate of iron is from 6 to 12 grains in 24 hours. Use in chlorotic diseases, atonic amenorrhœa,‡ &c.

The syrup of tannate of iron is made from citrate of iron by adding simple syrup, syrup of vinegar, and extract of galls. The iron is said to be in the state of protoxide.§

The ferri ammonio-tartras occurs in brilliant scales, semi-transparent, and of a reddish brown colour. It is soluble in cold water. It consists of one equivalent of tartrate of protoxide of iron, one equivalent of tartrate of ammonia, and four of water. It is made by adding hydrated sesquioxide of iron to a solution of tartrate of ammonia. It is permanent in composition, and is given to the extent of from 5 to 8 grains, in powder, pill, or solution. It is recommended chiefly in derangements of the uterine organs.||

---

* See Neligan, Conspectus of the Pharmacopeias.

† See Medical Times, 11th March 1843, p. 386. London and Edinburgh Journal of Med. Science, January 1843. Neligan, Conspectus of the Pharmacopeias.

‡ Memoir by MM. Gelis and Coute ; also Medico-Chirurgical Review, October 1840, p. 511 ; and Neligan, Conspectus of Pharmacopeias.

§ See Medical Times, 11th March 1843.

|| See Procter in American Journal of Pharmacy ; also Neligan's Mat. Med. p. 359.

The confectio ferri composita, made according to a formula given by Mr Heathcote of Gosport, contains clinkers, the scoriæ got from the blacksmith's shop. These appear from several accounts published of late years to have been long a popular remedy. Mr Heathcote says that they are much used in Bath under this form.

Take of clinkers reduced to an impalpable powder, 8 oz.; carbonate of magnesia, $\frac{1}{2}$ oz.; powdered ginger, 1 drachm; treacle, a sufficient quantity; make an electuary; $\frac{1}{2}$ oz. for a dose.

PATHOLOGY AND PRACTICE OF MEDICINE.

On the Treatment of Acute Rheumatism.

THE number of remedies proposed for the treatment of any disease is usually in proportion to its obstinacy; and, accordingly, while innumerable cures have been recommended in acute rheumatism, it is a disease which in many cases baffles our art. When we examine the various authorities for its treatment, we are struck, not only with the multitude of remedies proposed, but with their conflicting character; and we find that, while one practitioner extols *his* prescription as curing almost every case, another pronounces it utterly valueless. In Paris, the subject seems to have attracted much attention, and various papers have of late appeared in the different journals, consisting of clinical observations on particular remedies. One of these, by M. Martin Solon, on the use of nitrate of potass, we condensed for the 5th number of the Scottish and North of England Gazette; and we are induced to return to the subject by the publication in the " Archives Générales de Médecine " of two papers by M. Monneret,—the one containing his experience of the employment of sulphate of quinine, the other recording the effects of tincture of colchicum, nitrate of potass, and blood-letting. A valuable *resumé* of the various remedies employed, in rheumatism has been recently given by Dr Cowan in the Provincial Medical Journal, and from these sources we have derived much assistance in drawing up the following abstract. The various methods of treatment employed may be summarily comprehended under five heads: 1st, Pure Antiphlogistic Treatment; 2d, Stimulant Sudorific; 3d, Pure Stimulant; 4th, Alterative; 5th, Specific.

1st, Pure Antiphlogistic Treatment.—The principal remedial means comprehended under this head are blood-letting and free purgation. Sydenham was a decided advocate for blood-letting, recommending ten ounces to be abstracted every second day for four or five times. Stoll, Sir John Pringle, and Cullen, were also advocates for its employment. Dr Fowler has some interesting observations on the effects of blood-letting in this disease. He employed it in 41 out of 87 cases, with the following results: Cured, 3; much relieved, 7; moderately relieved, 7; little relieved, 20; not benefited, 4.

We find that Dr Fordyce was forced by experience to abandon blood-letting; and Herberden informs us that copious blood-lettings are unsuitable to the majority of persons in rheumatism. The consequence has been, that blood-letting fell into comparative desuetude, until its employment was revived in modern times. Bouillaud is the most decided and uncompromising advocate for its employment that has ever appeared, and has pushed it with a vigour which, *even in Edinburgh*, is startling. " The true specific," he observes, " of acute articular rheumatism is blood-letting; its *quinine*, if the

expression is allowable, is the antiphlogistic system, and bleeding is the prince of antiphlogistics."

The patient is on admission bled to sixteen or from that to twenty-four ounces. Next day bled twice to sixteen ounces, and to amuse him between the bleedings, cupping or leeching is practised, from twelve to twenty ounces being thus abstracted locally. On the third day there is but one bleeding and one cupping. On the fourth, unless cured, bled again. On the fifth, if the disease has not ceased, another blood-letting. The medium quantity of blood taken from vigorous subjects in a violent case is from four to five pounds. In some cases the abstraction of six, seven, or eight pounds may be demanded.*

Dr Craigie, a decided advocate for blood-letting, states, "that in order to be beneficial, it ought to be performed early in the disease, and carried to a considerable extent. * * * * It should be carried at first to 20, or 25, or 30 ounces at once, if possible, and within twenty-four hours to as much more."†

On the treatment of rheumatism by blood-letting Dr Alison remarks, "that large and repeated blood-lettings in the beginning of rheumatism increase the risk of metastasis to the heart."‡ Dr Hope, in recording the experience of 200 cases, in reference to the "bleeding plan," writes as follows:§ "From ten to twenty years ago, this and the diaphoretic plan were in full vogue, especially in Scotland ; and I saw them carried to their maximum in the Edinburgh Infirmary during a residence of two years in that institution. Now, many cases, I admit, were promptly and effectually cured—even annihilated at once—by the antiphlogistic plan ; but in many others, active bleeding was carried to the very last ounce that could be drawn, yet the enemy clung to the joints with a chronic grasp, and proceeded triumphant in his crippling career. Add the pale emaciated frame and the slow convalescence, sometimes of two or three months' duration, and, too often, I fear, the permanently shattered constitution," &c.

The following is the result of the experience of M. Monneret on the effect of blood-letting in 19 cases of acute rheumatism. In all these cases the blood-letting was practised with decision,—at least three general blood-lettings being prescribed during the first four days, with two cuppings from the inflamed joints and the præcordial region. The activity of the treatment stopped a little short of that recommended by Bouillaud.

When the blood-letting was to prove beneficial, the pulse gradually fell, the temperature of the skin diminishing at the same time. In other cases the pulse would fall suddenly, while the temperature of the skin remained above the natural standard ; in these, the pulse would again rise, and the pains return with redoubled intensity, either in the joints already affected or in others.

When the pains are not relieved in the first four or five days, we must not expect that the blood-letting will prove a radical cure, and if had recourse to after this, it appears to weaken the patient, and to produce a state of anæmia unfavourable to ultimate cure. In such cases M. Monneret has observed " bruits de souffle " in the large vessels and sometimes in the heart, abundant sweating, vigilance, fulness and frequency of the pulse. The

---

* See Nouvelles Recherches sur le Rheumatisme, &c., par J. Bouillaud, p. 133.
† Craigie, Practice of Physic, vol. ii. p. 564.
‡ Cyc. Prac. Med. Hist. of Med., part xxiv. p. 45.
§ Med. Gazette, vol. xix. p. 814.

pains, instead of disappearing, flit from one joint to another, or obstinately locate themselves in the ones first attacked.

These patients become tedious convalescents, often remaining two or three months in hospital.

Nor is the chlorotic state, with its gastralgic and neuralgic pains, the only danger to which such patients are exposed ; but it seems to pave the way for other diseases, induced doubtless by individual predisposition. Sloughing over the sacrum, severe and fatal pneumonia, white swelling, chronic enlargement of the joints, have all occurred in patients largely bled.

The following are the conclusions at which M. Monneret arrives :—

1st, That moderate blood-letting may have a beneficial effect in the treatment of acute rheumatism, if practised at the commencement of the disease, especially during the first four days ; but that after this period it can only weaken the patient, and retard the curative efforts of nature.

2d, That the cases where blood-letting was most beneficial were those in which it was employed early, and carried to a considerable extent in a short time.

3d, That although the beneficial effects of blood-letting so practised were far from being constant, yet that they appeared more satisfactory than those cases in which smaller blood-lettings were resorted to at intervals throughout the whole course of the disease.

Purgatives hold the place next in importance in the antiphlogistic treatment, and they have been freely used in the treatment of rheumatism. " Almost all practitioners," observes Dr Johnson, " recommend cathartics in acute rheumatism, on the principle of detracting from the general circulation through the channel of the intestinal canal, thus reducing vascular action."*   On the same subject, Dr Barlow recommends, after the use of the lancet, " to purge freely the stomach and bowels."†   So convinced are some practitioners of the efficacy of purgatives, that they attribute the benefit of certain remedies almost entirely to their cathartic properties. Of colchicum, for example, Dr Eliotson states, that it "generally does no good till it purges, and when once it purges the patient thoroughly the disease usually gives way.‡   Dr Craigie also speaks of the " benefit resulting from the use of guaiacum when it produces a loose state of the bowels. I must also observe," he adds, " that I have, in the course of administering tartrate of antimony for the treatment of rheumatic disorders, several times observed, that after it had produced rather profuse catharsis, the articular pains underwent remarkable abatement, with reduction of the pulse to the natural standard ; and they finally disappeared. Colchicum also very often purges smartly before it relieves the articular pains."§   It will be seen that free and repeated evacuation of the bowels forms an important part of the plan of Dr Hope, which we shall allude to more particularly hereafter.

2d, *The Stimulant Sudorific Treatment.*—One medicine of this class, Dover's powder, is regarded almost as a specific in rheumatism ; but whether it merits that character is rather doubtful. In the Edinburgh school it was largely employed, chiefly perhaps owing to the strong recommendations of Professor Gregory, who regarded sweating as the

---

* Practical Researches on Gout and Rheumatism, by James Johnson, p. 270.
† Cyclop. of Prac. Med., Art. Rheumatism.
‡ Lectures by Cooke, p. 740.
§ Craigie's Practice of Physic, vol. ii. p. 565.

evacuation most to be relied on after blood-letting. On this subject Dr Hope observes,—"Dr Gregory, the great advocate of this plan, premised venesection and purging till the pulse was lowered to 100, but 'with these appliances and means to boot,' I have seen patients stewed and parboiled (if you will excuse a culinary trope) for four, six, or eight weeks, and gain— what?—a more attenuated frame, chronic pains, and a confirmed suscepti- bility of rheumatic attacks on the slightest variations of temperature. This plan is now, I think, almost universally abandoned—by those at least who keep pace with modern science."* The guaiacum, a remedy introduced by Dr Dawson, and still occasionally employed, though usually in chronic rheumatism, seems to owe any efficacy it possesses to its sudorific powers. Dr Graves is an advocate for its employment in chronic cases where no symptoms of active local inflammation or general fever exist. The formula he prescribes is as follows,—and he regards it as acting by increasing the secretion from the skin, while at the same time it exercises a stimulant action on the nervous and capillary systems :—"Powdered bark, ʒj.; powdered guaiacum, ʒj.; cream of tartar, ʒj.; flowers of sulphur, ʒss.; powdered ginger, ʒj. :—to be made into an electuary with the common syrup used in hospitals.† The dose, a tea-spoonful three times a-day. This, however, will be too much for some cases and two little for others. The object in every case should be to keep up a mild but steady action on the bowels, and to procure a full alvine evacuation at least once a-day. If the dose already mentioned does not answer this purpose, it must be in- creased; if the bowels are too free, it must be diminished."‡ An electuary nearly similar in composition was employed by Dr Law; and Dr Munk states that he succeeded in curing three hundred cases by means of sul- phur combined with carbonate of soda in the proportion of two drachms of the latter to an ounce of the former. We have no doubt that, restricted to the class of cases which Dr Graves has described, sudorifics will be found beneficial; but in the acute variety of the disease, where spontaneous sweating so often occurs, and proves any thing but salutary, this method of treatment does not seem to be indicated. " The sudorific plan of treatment," observes Dr Scudamore, "not unfrequently disappoints our expectations, so as to aggravate rather than relieve the symptoms. Even when most successful, it is attended with the ill effects of producing much debility, and increasing the sensibility of the surface, so that for a con- siderable time almost any degree of exposure is hazardous."§ And Dr Barlow, in his very excellent article before quoted, observes : " The cure of rheumatism by profuse perspiration has fallen so much into disuse, that it can be hardly necessary to notice it."

3d, Pure Stimulant Plan.—The exhibition of bark in the treatment of acute rheumatism was introduced by Morton, but as it was opposed by Cullen, it never obtained the confidence of the profession until after the publication of Dr Haygarth. The following is his account of his method of prescribing it :—

---

* Medical Gazette, vol. xix.

† The above formula is similar to that of the empirical remedy for rheumatism, termed the Chelsea Pensioner, the composition of which is as follows :—Guaiac. ʒi.; powdered rhubarb, ʒii.; cream of tartar, ʒi.; flowers of sulphur, ʒii.; one nutmeg finely powdered ;—the whole to be made into an electuary with one pound of clarified honey. Two large spoonfuls to be taken night and morning.

‡ Clinical Medicine, p. 663.

§ Treatise, p. 542.

" After the stomach and bowels have been sufficiently cleansed by anti-
mony, I have for many years begun to order the powder of Peruvian
bark in doses of gr. v. x. or xv. every two, three, or four hours; and if this
quantity had a salutary effect, it was gradually increased to gr. xx. xxx.
or xl., with sedulous attention never to add more than what perfectly
agrees : it has generally been taken in milk, mint water, or the decoction
of bark." The results of this method of treatment, even on Dr Haygarth's
own showing, do not appear to have been very encouraging, as we find that
he lost twelve cases out of a hundred and seventy ; and accordingly we are
not surprised that it fell into desuetude. Of late, however, an attempt has
been made to revive its employment, more especially among the Parisian
practitioners ; and we find a letter addressed by M. Briquet to the Academy
of Medicine of Paris, stating that large doses of quinine were as successful
in the treatment of rheumatism as of ague. The researches of M.
Monneret bear upon this point, and we shall accordingly present an
abstract of them, as they appear to be at once the most recent and the
most accurate. In this valuable contribution, not only the effects pro-
duced by the medicine on the disease are recorded, but its influence on the
several functions of the body ; we shall, however, restrict ourselves to the
former. The sulphate of quinine was given to 22 individuals (17 males, 5
females) ; 13 suffered from recent acute rheumatism, with fever, in several
joints ; 3 had rheumatism in several joints without fever ; 3 rheumatism
accompanied with fever in one joint ; in 1 the rheumatism was at once
articular and muscular ; in the remaining 2, muscular and accompanied
with neuralgic pains. The quinine was given in solution, with an excess
of acid, and therefore in the state of bisulphate. The medicine was in
every case persisted in for at least 10 days, sometimes for 14. One patient in
8 days took 29 grammes* of the salt, and after a cessation of some days,
during which he had been free from pain, he took, on account of the
return of the pain, in all 47 grammes ; a second took 57 grammes in 12
days ; a third 50 in 11. The smallest dose was 2 grammes, the largest was
6. Of the 22 patients, 7 only were cured ; and among these, one was affected
with muscular and neuralgic rheumatism ; a second had articular rheuma-
tism of 15 days' standing, and was almost free from fever ; a third had
slight rheumatism with moderate fever ; in a fourth the pains were of 8 days'
standing, and the other local symptoms slight; so that, in fact, only 3 cases of
acute articular rheumatism appeared to yield to the remedy. In 15 other
cases, the pains were remarkably alleviated, usually on the second or third
day, more rarely on the first. In two-thirds of the cases, the pains ceased
so entirely that the cure was regarded as complete, the patient being able to
move his limbs without suffering, but they returned again, even although
the remedy was persisted in. The sulphate of quinine produced a curious
effect on the nervous system, which showed itself in two ways,—either in a
state of great excitement resembling that of intoxication, or a state of
collapse similar to that of typhus fever ; and it was remarked, that the
effect upon the articular pains seemed to correspond with the intensity of
the nervous affection. These experiments seem to be very accurate, and
certainly do not give much reason for confidence in the curative power of
quinine.

The late Dr Davis, the professor of Midwifery in the University of Lon-
don, recommends bleeding followed by an emetic, and in five or six hours

* The gramme equals in round numbers ¼ drachm or 15.440 grains.

an active purge ; after which he gives from a scruple to half a drachm of powdered yellow bark every three or four hours. Under this treatment the disease seldom exceeded a week.*

4th, Calomel and Opium Plan.—The efficacy of opium in the treatment of rheumatism has been long known. De Roches cured two cases by its use alone,† and since then it has been recommended by several successive authors. The practice, however, has met with much opposition. Among those who condemn it are found the high names of Sydenham, Cullen, and Armstrong. Dr Corrigan is an advocate for its employment, and did not find it affect the cerebral functions. The mean quantity which he exhibited was ten to twelve grains, but sometimes double this dose was given. Professor Christison recommends frequent doses of Dover's powder, which may relieve either by its opiate or sudorific properties. Other narcotics have been given, especially the extract of aconite, or that of belladonna. The *calomel and opium* plan, however, was first introduced by Dr Robert Hamilton of Lyme Regis‡, who first bled his patient, and then gave calomel and opium at suitable intervals, until the disease ceased, or the specific effects of the medicine were produced. Of all the methods of treatment this is perhaps the one in which the greatest confidence is placed, and more recent improvements have consisted merely in modifications in the method of prescribing it.

5th, Specific Remedies.—Under this head we class a few agents, regarding the particular effect of which on the constitution we are not sure, and which we cannot therefore arrange under any of the foregoing heads. *1st, Colchicum* is a remedy which has been largely employed in the treatment of rheumatism, and generally with the most beneficial effects. It is highly recommended by Dr Barlow, an author of great experience in these affections, and indeed, in combination with other remedies, is employed by almost every practitioner of acknowledged reputation. It was with not a little surprise, then, that we observed that the author of the article Rheumatism in the " Library of Medicine," states that colchicum has long held and continues to hold an ill-deserved reputation as a remedy for acute rheumatism, and this upon the authority of eleven cases. On the same amount of experience, the same author gives the authority of his name against the use of calomel and opium. We shall give M. Monneret's observations upon this drug, made with the tincture of the bulb of the colchicum. Most of the patients took from 4 to 16 grammes in the 24 hours,—the one in one or two doses, the other in four doses. M. M. always exceeded the usual dose. He never commenced with less than 4 grammes, and he remarked that while the doses could be very rapidly increased, the large ones could not be safely continued long. Some patients took it for 9, 10, or 13 days, but with an interval of 2 or 3 days. 21 patients were treated by this medicine, and, in all these cases, it was continued until M. M. was convinced that it was producing no effect. M. M. does not consider it necessary to state minutely the peculiarities of the cases, " because in not a single one was the use of the tincture of colchicum followed by an evident and durable cure." But when we come to examine further, we find that 8 patients, that is to say, more than a third, recovered while taking it, and that all that our author means to assert is, that it cured them by means of its powerful purgative effect, and not by any latent specific virtue which it might possess. This opinion we

---

* Lancet, 1841.   † Medical and Surgical Journal, vol. i. p. 154.
‡ Medical Commentaries, 1783.

have already shown to be held by many British practitioners, who, in order to ensure the purgative effect, exhibit the colchicum in combination with saline aperients. " The two best internal medicines," observes Dr Elliotson, " are without doubt colchicum and mercury. Colchicum here, as in the case of the gout, generally does no good till it purges, and when it once purges the patient thoroughly, the disease usually gives way. It should be given in the same way as in gout, that is to say, with magnesia, that it may produce its effect as speedily as possible. As soon as it purges it is right to desist; and also as soon as its effect ceases. If you give a dose of hydrocyanic acid with the colchicum, it sits better on the stomach; you may exhibit one, two, or three minims."*

Dr Hughes gave a pill of opium and antimony at night, and half a drachm of the colchicum wine, with a drachm of the sulphate of magnesia, three or four times a-day, until copious, liquid, yellow evacuations were produced, when, if the pain was abated, bark and soda were prescribed. Mr Wigan gives 8 grains of powdered colchicum root every hour, until vomiting, purging, or profuse perspiration occurs. The minimum quantity is 5 doses, the maximum 14, the average 8 or 10.·

2. *Nitre.*—This remedy was introduced in 1764 by Dr Brocklesby. A full account of it was given in the 5th Number of the Scottish and North of England Gazette, in which the observations of M. Martin Solon were condensed. His observations were made on 33 patients : of these, 20 were cured from the 3d to the 7th day ; 11 from the 9th to the 10th ; 2 from the 11th to the 15th. In 27 of these cases the malady ceased gradually after the exhibition of the remedy ; in 6, other articulations were attacked. In 9 cases, where bleeding was also employed, the convalescence seemed to be rendered more tedious, and two of these patients had relapses. The usual dose was 30 grammes in the 24 hours, and in ten cases it was carried as high as 60. In 9 cases it produced nausea, vomiting, and purging, but this was removed by adding syrup of poppy to the lemonade in which it was usually given. Dr Brocklesby gave 18 drachms in the 24 hours ; Mr White, 12 drachms. Mr Horne recommends the following mixture :—
℞. nitratis potassæ, ℥ss. ; tart. antimonii, gr. ii. ; spt. ætheris nitrici, ℥i. ; aquæ fontis, ℥xii. : misce. A wine-glassful three times a-day.†

M. Monneret tried nitre in 8 cases, in all of which the rheumatism was recent and intense. One of the patients suffered from meningitis, and another from pneumonia ; the dose given was from 8 to 30 grammes. M. Monneret could not observe any benefit result from its employment. He never gave more than 30 drachms. The articular pains, the fever, the state of the pulse, and the urine, were unaffected by its employment, nor did the latter exceed the quantity of fluid swallowed. In all these cases the remedy had to be changed in order to prevent serious results.

3. *Iodine.*—Dr Cowan gave the hydriodate of potass in 52 cases, in average doses of five grains three times a-day. In no instance was either bleeding or leeching prescribed. The following is his opinion of its powers :

" The action of iodine in rheumatism 'is, on the whole, satisfactory ; in many cases it may be regarded as heroic, while in others not *a priori* distinguishable, almost negative. After examining the experience of different observers, we are inclined to suspect that we have often erred by the smallness of the dose, and think it probable that the quantity should in some

---

* Letters by Cooke, p. 740.   † Lancet, Dec. 10, 1842.

cases be increased to the point of tolerance, the rheumatic element, so to speak, varying in amount and intensity in different individuals."

"In the Lancet for Nov. 16, 1839, Mr Henry Rees says, 'In all cases of acute rheumatism the diet should be strictly regulated; avoid rigidly beer, wine, spirits, and animal food. Milk, beef-tea, butter, eggs, fish, &c., are all pernicious. His theory is, that the disease depends on an excess of nitrogen. In very urgent cases bleeding and mercury may be necessary; but he regards the hydriodate of potass as certain an antidote to the rheumatic diathesis as mercury is to that of syphilis. Its combination with liquor potassæ acts, he says, like a charm in rheumatic iritis."

"In a very obstinate case, characterized by severe pains, relieved by heat, and unaccompanied by much swelling, occurring in the practice of Mr John Brady of London, the following means proved very successful:— Compound extract of sarsaparilla, six drachms; iodine, half a grain; hydriodate of potash, half a drachm; boiling water, six ounces: mix. A fourth part three times a-day, with one of the subjoined pills. Hydrochlorate of morphia, one grain; disulphate of quinine, nine grains; blue pill, ten grains; rhubarb pill, twelve grains. Divide into twelve pills."

Dr Graves recommends hydriodate of potass in lumbago.

"I first became acquainted with the remarkable efficacy of this medicine in lumbago and sciatica, under the following circumstances. In the memorably wet month of July 1839, I was called out of bed at midnight to visit a lady in the country, and the vehicle sent to convey me was a hack, covered car. The cushions were very damp, and I had not proceeded half a mile before I was attacked with lumbago so severe that I could scarcely walk when I arrived at my patient's residence. Next morning I was better, having perspired much during the night; but still the pain was troublesome, and as the season continued unusually cold and wet (indeed it scarcely ever stopped raining from the 8th of July 1839 to the 19th of February 1840), and as my duties exposed me much to the weather, and prevented me from giving myself the necessary rest, my lumbago continued to increase again, and in about a month, the gluteal and sciatic nerves of the left side became engaged; I noted particularly, that the pain spread very gradually downwards from the lumbar region, so that it took a week or ten days to arrive at the ham, and a still longer time at the ankle. I was then quite lame of the left leg, suffered much from pain in bed, and had become so helpless, that I had to get my servant to draw on my stockings. During all this time my general health was perfect, appetite good, digestion regular, and no deviation of the urine from the natural appearance. I mention this because several of my medical friends advised me to take antibilious aperients, an advice founded on Abernethy's doctrine, that many local affections proceed from stomach derangement. I was at last forced to try something for my relief, and had myself cupped, and tried the warm douche and Dover's powder, but without any good effects. I began now to fear that I should be forced to give up all professional business, and confine myself to the house for many weeks, in order to go through a mercurial course, combined with proper topical applications, when happening to meet Mr Ferguson of Kildare Street, he recommended me to try hydriodate of potash, of which he was good enough to send me a drachm dissolved in a pint of decoction of sarsaparilla. I took a quarter of this daily, and may literally apply here the common phrase, that I felt each dose do me good; in truth, the benefit I derived was perceptible hourly, and was so rapid, that in four days all traces of the lumbago were gone, and my lameness had quite ceased. I did not

take more than one bottle, *i. e.* one drachm of the hydriodate ; but the good effect continued after I had ceased taking it, and in less than a week I was perfectly well. Subsequent experience enables me to recommend this medicine strongly in sub-acute and chronic lumbago and sciatica.*

" It is right to observe, that the remedy had in my own person to work against various disadvantages, for I neither relaxed from my labours nor refrained from eating and drinking as usual. This is only another example of the many I have met, which prove how injudicious it often is to seek the cure of local inflammations by means of lowering the whole system."†

We shall lastly present our readers with a summary of the method of treatment adopted by several practitioners, and leave them to judge for themselves as to the plans proposed.

Mr Baynton of Bristol orders all mufflings off his patients, and admits a free circulation of cool air through the chamber by open windows. Absolute quiescence is enjoined, the most rigid abstinence is to be observed, and no medicine is given except gentle laxatives ; the shower bath is to be used during convalescence.

" The late Dr Hope, after six years' experience upon 200 cases, gives decided preference to the following plan :—After one or even two full bleedings in the robust, he gave seven to ten grains of calomel, with one or two of opium at night, a draught with fifteen to twenty minims of colchicum wine, and five grains of Dover's powder in saline mixture, three times a-day. It was seldom necessary to repeat the calomel more than from two to four times, after which he continued the opium at night, with the colchicum draught and a senna laxative every morning. The patient was almost always well in a week, and able to commence his work in seven to ten days after the pains had ceased. Ptyalism was avoided unless the heart was involved.

" In chronic cases he gave five grains of calomel, and one of opium, at night, for five or six times, with the senna and colchicum draught as before. Local depletion with some form of counter-irritation were usually employed.

" Dr Macleod advises bleeding, abstracting from twelve to thirty ounces during the first week, giving three to five grains of calomel at night, and a senna purge in the morning. Opium to the extent of two grains in the twenty-four hours is often useful, and the guaiacum is recommended as the best after-treatment. In lumbago Dr M. thinks well of a brisk calomel purge once or twice a-week as above, and considers half a drachm to two drachms of the compound tincture of guaiacum three times a-day, with a grain of opium at night, the best plan."

" Against rheumatic headach Dr Johnson has found no treatment so successful as the following :—Eight grains of Dover's powder and two of calomel at bed-time, on alternate nights, for two or three times, followed by a third part of the following mixture the next morning, to be repeated in

---

* " My friend Dr Osbrey, in an exceedingly useful paper on the ' *Uses of some of the Combinations of Iodine,*' published in the twenty-first volume of the Dublin Medical Journal, makes the following remarks, the importance of which I fully admit : ' The readers of this journal are aware that Dr Graves has strongly recommended the use of iodide of potassium in lumbago, for which I have found it an excellent remedy. There is one form, however, of rheumatism of the muscles of the back and loins, in which it should be used with caution ; it is that which is attended with dyspeptic symptoms, such as flatulency, diarrhœa, and irritability of the stomach ; these symptoms, in my opinion, should be first relieved before having recourse to iodine. In sciatica I have also found that remedy useful.' "

† Clinical Medicine, p. 864.

two hours, if necessary :—Infusion of rhubarb, three ounces ; tartrate of soda, three drachms ; powder of rhubarb, half a drachm ; tincture of senna, half an ounce ; wine of colchicum, a drachm and a half : mix.

" The same observer remarks (Medico-Chirurgical Review, April 1838), that many of the most stubborn cases will yield to a course of blue or Plummer's pill, taken at bed-time, and followed by a warm saline and colchicum draught in the morning. Flannel clothing, and an occasional warm bath, are valuable adjuvants."

" In the acute stage Dr Graves principally relies on bleeding, with large doses of tartar emetic and nitre ; and in less urgent cases, particularly if complicated with bronchitis, he has derived much benefit from the following mixture :—Almond emulsion, eight ounces ; vinegar of colchicum, half an ounce ; acetate of morphia, one grain ; nitrate of potash, half a drachm : mix. Half an ounce every hour or every two hours."

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

Growth of New Bone on the Internal Surface of the Cranium in Pregnant Females.

M. Ducrest has published a memoir on this subject, founded upon 231 observations, which he has made in women who have died in or shortly after childbed. He commences by detailing 10 cases in which the osteophyte may be traced through its various phases. In its earliest stage nothing attracts attention but red spots, which occupy one, two, or more of the depressions on the cranium corresponding to the cerebral convolutions. When these patches are scraped they are found to consist of layers of a reddish matter on which there is as yet no hard substance. The patches, at first isolated, unite, enlarge, and constitute on either side of the cranium (for they are developed symmetrically) extensive layers, which ultimately join in the median line. A few patches have been found at the base of the cranium ; but the frontal region is that on which they are most commonly observed. As these patches increase in extent, they acquire greater firmness, and approach more and more to bony hardness. Nevertheless, their consistence is not always in proportion to their extent ; for they are sometimes found to cover the whole inner surface of the skullcap, and yet to be cut as easily as cartilage, while at other times, when in much smaller patches, they are with difficulty marked by the edge of the scalpel. When the osteophyte is in its rudimentary state, the only trace of tissue which can be perceived is a tortuous vascular network ; when somewhat further advanced, it is composed of two distinct layers, the one of compact tissue in connexion with the dura mater, and the other of spongy texture applied on the inner table of the skullcap. After describing the new product, the author passes to an examination of the adjoining structures—the dura mater and the cranial bones ; in the former he has never found any variation from the natural condition, but in the latter he has constantly observed increased vascularity in the parts adjoining the new growth. The osteophyte does not appear to give rise to any inconvenience, nor to any symptoms by which we could pronounce on presence during life. Out of 231 cases of women who had died in childbed, M. Ducrest has observed the " *exostose epiphysaire*" in 91 instances ; the number of pregnancies does not appear to predispose to the development of this new product ; and M. D. sums up his observations with the four following conclusions :—1. There is found in the cranium of women who have died in childbed a production at first cartila-

ginous, but which ultimately becomes osseous ; 2. The cranium and dura mater in connexion with the osteophyte present no special lesion ; 3. It is most commonly met with in young females ; 4. Its presence does not give rise to any peculiar symptoms.—*Mémoires de l'Académie Médicale d'Observation*, 1844, tome ii. p. 381.

Several of the statements advanced as facts by M. Ducrest are totally at variance with the observations both of Professor Rokitanski and our own. We imagine M. D. to be perfectly ignorant of the extreme attention paid to this subject for many years past by Prof. R. ; for M. D. tells us that it is " *une chose fort peu connue*," and his account is not to be compared either for accuracy or completeness with that of Rokitanski published in the *Oesterr Med. Jahrl* for 1838—six years ago.   We have had opportunities of assisting at several of Prof. R.'s investigations, and it has always appeared to us that the new bone grows on the elevations of the inner table of the cranium, not, as stated by M. Ducrest, on the depressions : we do not, however, agree with Rokitanski in thinking that its growth is confined to the elevations because the brain exerts greater pressure on the depressions than on the elevations, for we should suppose this to be equal on all points within the cranium.   It is most frequently, also, very thick and fully developed along the course of the large vessels, for example, along the track of the arteria meningea media and the longitudinal sinus.   Professor Rokitanski observed the new product in more than the half of 1500 cases of puerperal females, whose bodies he examined in the space of ten years ; and as the greater number, if not all of them, had died of some variety of the affection termed " puerperal fever," he concluded that it had some connexion with that disease ; but later investigation—in pregnant women, for example, who had died of the most rapid form of Asiatic cholera, and in whom he found the osteophyte—caused him to avow the incorrectness of his first supposition.   We have ourselves seen it where the females have died from hemorrhage, convulsions, rupture of the uterus, and phthisis ; it has been seen previous to the sixth month of pregnancy, and so late as three months after delivery ; and does not appear to be developed in cases of extrauterine pregnancy, moles, or polypi.   In the opinion of Rokitanski, it is in some way connected with the cessation of the menstrual discharge.   His theory is founded on the statement of Retzius, that the menstrual discharge contains free phosphoric and lactic acids ; and he thinks that the phosphoric acid thus retained in the system may be periodically employed in the production of new bone, and that therefore the osteophyte ought not to be found in those females who have menstruated or suffered much from acidity of the primæ viæ during pregnancy, as, in either of these cases, the acid is eliminated from the system.   This is an hypothesis, however, which will require to be tested by the observation of years.   Prof. R. endeavours to support this theory by the fact, that once in a chlorotic virgin he observed hyperostosis of the cranium ; in this case there was also deposit of phosphate of lime on the mitral valve.   In general this hyperostosis is productive of no bad consequence ; but a very singular case—one highly interesting in a physiological point of view—is recorded, where the bony growth encroached upon several of the foramina at the base of the cranium through which the nerves pass out, and induced a series of remarkable nervous symptoms, ending in the death of the patient.*   The *exostose epiphysaire* has been found on all the bones of the cranium and face, but never on those of the trunk, pelvis, or extremities.

---

* Hufeland's Journal der Pract Halkunde, Juni 1840, s. 61.

Pregnancy with Imperforate and Bilocular Uterus.

DR LUMPE of Vienna was called to attend a female, æt. 30, in her first confinement. An examination *per vaginam* detected that that canal appeared to be partially closed up, at the distance of two inches from the external parts, by a structure composed of interlaced fibres of different thickness; about an inch and a half above this, on the posterior wall, the vagina seemed to end in a *cul de sac*. No vaginal portion of a uterus could be discovered. The urethra was so wide that the finger could be easily introduced into it, and the fœtal head felt pressing into the pelvis. When the first pains occurred, the portion of the posterior vaginal wall beyond the septum was perceived to widen, so that the point of the finger could be farther advanced, and an incision was just about to be made into this part, when a violent uterine contraction supervened, two or three ounces of blood were effused, and soon thereafter the liquor amnii escaped. On examination, there was discovered a rough transverse opening, high and posterior, which rapidly widened, and through which a living child was soon after born. A few days thereafter the patient was seized with metroperitonitis, and died in four days. On dissection there was found violent peritonitis with much exudation; the cavity of the uterus was divided vertically by a partition wall, down to the internal orifice of the cervix, into two portions; the left had been pregnant, the right division was widened, increased in volume, vascular, and coated with a fine membranous exudation (the decidua?) The cervix and orifice were natural.—*Oesterr Mediz Wochenschrift*, No. 37, 1843.

The above detail would lead us to suppose that a rupture took place somewhere, were it not that the os and cervix uteri are said to have been natural : the case is certainly not clearly recorded. The practice of making an os uteri by incision when one does not naturally exist must always be attended with much danger, as there is no possibility of preventing the incision being prolonged by laceration. The practice has however been in a few cases attended with a successful result. It is rarely indeed necessary; for although, previous to the supervention of labour, experienced accoucheurs have been unable to discover any trace of an os uteri, the parturient efforts do not last long before the aperture appears and dilates with tolerable ease. Another point of interest in the preceding case is the circumstance that a decidua existed in the unoccupied half of the uterus; this is an additional proof that the decidua is not an adventitious membrane caused only by local irritation, as some would have us believe, but a veritable hypertrophy of the mucous lining of the uterus. We know that during pregnancy the uterus as a whole grows, that its nerves and vessels individually enlarge, and why not its mucous membrane ?

FORENSIC MEDICINE AND MEDICAL POLICE.

Term of Pregnancy exceeded by Four Weeks.

A PREGNANT woman, who had already borne three children, was attended by Dr Hayn of Konigsberg for " gastro-nervous fever." The affection was so severe that premature labour was threatened. Dr H. made an examination *per vaginam*, and felt satisfied, as well from this as from the woman's account, and her other symptoms, that the natural term of her utero-gestation would expire about the 23d of May 1841. The patient recovered from

her fever, and at the above-mentioned date was seized with weak labour pains, copious mucous secretion from the vagina, and remarkable sinking of the uterus into the pelvis.   After three days the pains wore away ; and four weeks thereafter the woman was with difficulty delivered of an unusually large child.—*Casper's Wochenschrift*, No. 47, 1843.—The question of protracted gestation has given rise to considerable discussion in courts of law, and we have thought fit to extract the foregoing case ; for, in the words of Mr Taylor, in his excellent Manual of Medical Jurisprudence, " it is only by the accumulation of well-ascertained facts, from all authentic sources, that medical knowledge can be made available to the purposes of law." We should suppose that no one at the present day doubts of the occasional protraction of gestation for two, three, or even four weeks.   It would be much better that, in reckoning the duration of pregnancy, it should be counted by months of 28 days only ; for such a month is a determinate definite period, not liable like the calendar month to vary from 28 to 31 days.   Of course the objection urged to all such cases as the above is, that " there has been some error in the calculation."   The remarks of the author whom we have already quoted on this subject are so excellent that we shall extract them for the benefit of our readers :—" It is impossible to admit that these cases depend on some mistake being made in the calculation of the period, since this calculation was founded upon the same principles as those adopted in cases of ordinary pregnancy.   Hence, if there were a mistake in the one, there would be in the other,—if an error in the exception, there would be in the rule.   Either pregnancy is wrongly calculated at the thirty-eighth and fortieth week, or it is rightly calculated to extend occasionally to the forty-fourth week."

Toxicological Effects of the Sulphate of Quinine, by M. Monneret.

THE author states that, when the sulphate of quinine has been given for a long period and in large doses, it produces certain poisonous effects characterized by three distinct orders of phenomena,—1st, nervous derangement ; 2dly, gastro-intestinal irritation ; and, 3dly, a state which he terms " typhique" on account of its resemblance to typhoid fever.   1st, *The nervous derangements* manifest themselves in half or a quarter of an hour after the exhibition of the dose ; there is noise in the ears, almost invariably vertigo, and sometimes stupor, but no headach, how severe soever the other symptoms may be ; vision becomes confused, and objects are perceived as if through a mist.   Amaurosis was met with in four instances ; in one of these the patient had taken 15 grammes * of the sulphate ; a female who had taken the same quantity in three days, lost her sight entirely for five days. " *L'ivresse quinique,*" chinic intoxication, shows itself of two kinds ; either as a state of great excitement, or of collapse, the latter being the most common. In the former variety the patients are agitated, attempt to get out of bed, speak in an agitated, tremulous, indistinct voice, and, if they have been previously rheumatic, declare that their pain has entirely left them ; in the latter form there is exhaustion, stupor, feebleness, a certain slowness of intellect and memory, and disinclination for food ; at the same time the eye is " terne," " abattu," and glassy, the eyelids half open, the countenance much disturbed, and the noise in the ears and vertigo intense.—2dly, *Gastro intestinal symptoms.*   After the nervous symptoms have manifested themselves,

---

* The gramme is equal to 15·434 English troy grains ; say in round numbers 15½ grains.

there is a disagreeable, sometimes a painful sensation opposite the inferior extremity of the sternum, occasionally also symptoms of irritation of the œsophagus and cardia.   Of twenty-two individuals affected with rheumatism to whom the quinine was administered, six suffered from gastro-intestinal inflammation characterized by the following signs :—Tongue red, dry, and rough; this organ as well as the lining membrane of the mouth was spotted with patches of diphtherite, which in one case extended into the pharynx ; extreme thirst ; frequent bilious vomiting ; colic pains and tension through the whole abdomen ; constipation followed by diarrhœa ; in one case the numerous stools consisted almost entirely of pure blood mixed with false membrane ; in another the inflammation was moderate in the stomach and small intestines, but severe in the large ; there was violent pain along the course of the colon, frequent serous evacuations, with tenesmus and heat at the anus.   The gastro-enteritis lasted for a considerable period, and was liable to return. It was very severe in three cases, in one of which the first dose of quinine sufficed to cause severe intermitting abdominal pain, not increased on pressure, but which was quickly followed by the symptoms above described ; in the other two cases the symptoms were not developed until the quinine had been taken in large doses for ten or eleven days.—3dly, *The typhoid symptoms* are developed shortly after the others ; the countenance expresses stupor and dulness.   In two cases only the typhoid appeared unaccompanied by any other phenomena.   In six cases it supervened on gastro-enteritis ; in five of these cases it was accompanied with great prostration and repeated epistaxis ; in the sixth—that in which the irritation predominated especially in the large intestine—the typhoid symptoms were slight ; but in all the intellect was weakened and slow ; in one patient there was hemorrhage from the urinary passages, and small ecchymosis on the abdomen ; in another menstruation appeared copiously twelve days before its proper period.—4thly, *Effects on other functions.*   One patient suffered from extreme itching of the skin, without any appreciable eruption ; in a second, there was disagreeable pricking in the soles of the feet ; in a third, an eruption like rubeola, but without any of the other phenomena of that disease ; in a fourth, true scarlatina, with its local characters only ; in a fifth, papulæ on the abdomen, which quickly disappeared ; in a sixth, papulæ mixed with petechiæ. The urinary secretion was not increased, but sulphate of quinine could be detected in it twenty minutes after the exhibition of the salt, and could still be discovered in that secretion long after the poisonous symptoms had disappeared.—*Journal de Médecine, Nos. for January and February* 1844.—All of the patients alluded to in the foregoing detail were under treatment for rheumatism ; the quinine was generally given in solution with a slight excess of acid, in the dose of two grammes a-day, gradually increased to six. One patient took twenty-nine grammes in eight days, a second fifty-seven in twelve days, and a third fifty in eleven days.

Part IV.—MEDICAL MEMORANDA.

THE LATE DR ANDREW MOIR.

It is with deep regret that we announce the death, on the 6th inst., of the late Dr Andrew Moir, Lecturer on Anatomy in King's College Medical

School. Cut off at the early age of 38 years, from contagious fever, caught in the discharge of his profession, his death has deprived Aberdeen of a townsman of whom she had reason to be proud, and her medical school of one of its most efficient teachers. What adds to the melancholy nature of the event is, that Dr Moir has left an aged mother, a widow, and three very young children (the last of whom was born two days after his decease), totally unprovided for, without relatives, and destitute even of temporary supplies.

Unknown to many of his fellow-citizens, because occupying no prominent place in the eye of the public, Dr Moir nevertheless possessed talents of a very high order ; and, what is more, he rendered services to the community, and made sacrifices in the performance of them, which entitle his memory to lasting honour, and his bereaved family to the warm sympathy of the benevolent.

We regret that we are precluded, by want of space, from giving an outline of his eventful history. Suffice it to say, that, within a short time, Mr Moir completely established his reputation as a teacher, secured himself in the esteem and patronage of the medical students, whom he drew in great numbers annually to his class, and commanded the confidence of his seniors in the profession. For eleven years, during which he was a private lecturer, he taught anatomy under very disadvantageous circumstances, encountering difficulties such as few but himself could have borne up under. Twice his property was burnt and destroyed by the populace ; and the circumstances attending the last popular outbreak, in 1832, the numbers and exasperation of the people, the personal injuries he received, and the narrow escape he made with his life, the calling out of the military, and the sensation it excited all over the town, will be fresh in the memory of many of our readers. It would require the imagination of Dickens to do justice to the scene which was then exhibited ; and, in truth, it would form a fine subject for his pen.

In 1839, the University School, then under the joint patronage of King's and Marischal Colleges, was broken up, and each college set up a medical school of its own. Mr Moir was chosen by the professors of King's College their lecturer on anatomy ; and such was the sense they entertained of his distinguished merits as a teacher, that they unanimously conferred upon him, in 1840, the honorary degree of M. D.

The situation of Dr Moir's bereaved and destitute family has a strong claim on the sympathy of a generous public—a claim which, we are sure, will not be disregarded. Indeed, we have evidence that active exertions are making among his late professional friends, in order to secure some provision for them ; and that a general feeling, which we are anxious to foster, prevails among the whole community to come forward in their behalf. Mr Robert Dyce, advocate, has, we are glad to learn, kindly consented to act as treasurer ; and he, or any of the medical gentlemen in town, will be happy to receive the contributions of the benevolent.

It speaks strongly for the estimation in which the late Dr Moir was held, that his remains were, on Monday last, followed to the grave, from the Medical Society's hall, by the whole faculty, the medical students, the medical professors and lecturers, both of King's and Marischal Colleges, and a large body of private friends.—*Aberdeen Journal, February* 14, 1844.

PART I.—ORIGINAL ARTICLES.

Condyloma, a Primary Form of Venereal Disease identical with Sibbens. By DAVID SKAE, M.D., F.R.C.S., Lecturer on Anatomy, Surgeon to the Lock Hospital, Eye Dispensary, &c.

THE flat and whitish elevations of the skin occurring on the verge of the anus, on the perinæum, labia, or scrotum, and occasionally on the thighs, or even in the axillæ, and known under the names of *condylomata, tubercules muqueuses,* &c., are in this country generally ascribed to one of two causes. By some of our most distinguished writers they are ascribed to inattention to cleanliness in persons labouring under chronic discharges from the genital organs. " These soft excrescences," says Dr Adams, " arise sometimes in consequence of a discharge from the rectum stimulating the neighbouring parts to ulceration. If such ulcers are prevented from healing by the discharge continuing, or by the friction of the parts, they must either ulcerate deeper and wider, or the cuticle will send out processes to defend them. These, on account of the pressure they receive, grow in various shapes, from which they have acquired their names.

" They will arise from a venereal origin in two ways. If a secondary ulcer is seated in these parts, that ulcer, having no power of healing itself, will take the character above described from the nature of the parts. Sometimes, also, the matter of gonorrhœa, by falling from the vagina along the perinæum, will produce ulceration, and the same consequences follow."*

---

* Adams on Morbid Poisons, London, 1807, p. 173.

M

By others these condylomata are believed to be identical with the scaly eruption which follows the true syphilitic sore, modified in its appearance by the situation where it occurs. " When the eruption," says Mr Carmichael,* speaking of the scaly syphilitic eruption, " affects a skin which is opposed by another skin, as between the nates, or between the scrotum and thigh, or under the arms, or between the thighs, it is not scaly ; but the skin becomes elevated into a moist, soft, flat, or somewhat convex surface, which discharges a whitish matter. These are the appearances which, I believe, in authors are termed condylomata, fici, cristæ, mariscæ, &c.—denominations applied according to their figure, or perhaps the fancy of the practitioner."

The opinion last cited is the one generally adopted by most of our systematic writers on surgery regarding condylomata. By M. Ricord and other continental writers they are arranged with the secondary symptoms of syphilis. With pretty extensive opportunities of observation in the Lock Hospital of this city, I myself entertained the opinion for some years, that condyloma was a consequence of filth and protracted gonorrhœal or leucorrhœal discharges ; nor is it surprising, for in a great number of the cases—and they always constitute a large proportion of those under treatment in the hospital—these condylomatous excrescences are seen in females who either have had, or are at the time labouring under, chronic discharges from the uterus or vagina.

In 1835, the late Dr Wallace of Dublin, in a series of clinical lectures published in the Lancet, announced some new views regarding the nature of these excrescences, or, to speak more correctly, of this peculiar eruption. He was the first to point out that it was almost invariably associated with a certain group of symptoms of a peculiar and definite character. Of this group the most remarkable pointed out by him was a peculiar morbid state of the mucous surface of the lips, cheeks, palatine arches, or tonsils. This morbid state consisted in peculiar white elevated patches, having the appearance of parts touched with nitrate of silver, or coated with milk ; these patches are more or less elevated, irregular in form, and presenting occasionally superficial ulcerations on their surface.

Dr Wallace further pointed out that these spots were associated with, or rather preceded in general by, an exanthematous

---

* Carmichael on the Venereal Disease, &c., Dublin, 1814, p. 42.

eruption of a mottled appearance, and of a red or brownish colour, sometimes preceded by vesication or scaliness, but never by pustules ; sometimes elevated and approaching in appearance, in various parts of the skin, to the mucous tubercles or condylomata commonly observed on the genital organs, and producing in the folds of the skin (as between the fingers, &c.) those linear ulcerations called rhagades ; under the nails, onyxis ; in the head, &c., falling of the hair.

From these and other facts, he inferred that condylomata, and the peculiar patches on the mucous membrane of the mouth and fauces, were parts of the same exanthema, modified in appearance by the tissue where they appeared, and constituting a group of " constitutional," to use his own words, " or secondary venereal symptoms, of which condylomata, rhagades, onyxis, falling of the hair, and a peculiar state of disease of the mucous membrane of the mouth, are the most remarkable." To this group of symptoms he gave the name of " exanthematic primary syphilis."

He further asserted, that it could be propagated by inoculation and by simple contagion, and that it did not differ in its origin from syphilis, but resulted from a peculiar modification of the syphilitic virus from its having passed through the system. " The exanthematous group of venereal eruptions," he says, " are produced by *secondary matter*, or by matter originally derived from the common pustular primary sore, and *subsequently* modified by passing through the system."*

After the extensive series of experiments performed by M. Ricord with the matter of secondary syphilitic sores and eruptions, and the verification of his results in the hands of others, it can scarcely be doubted that it is impossible to produce a venereal sore of any kind, much less the peculiar group of symptoms described by Dr Wallace, by inoculation with matter so modified. I do not say that it is impossible to reproduce condyloma by inoculation from the matter of *a condyloma*, but that there is no evidence that condyloma can be produced by inoculation with the matter derived from an undoubted *secondary syphilitic* ulcer or eruption.

This conclusion, while it appears to overturn the ingenious theory of Dr Wallace, leads, if the facts stated by him regarding the symptoms of this affection are correct, to the adoption of

---

* Lancet, 1835-6, vol. ii. p. 198.

another view of the subject, now becoming prevalent in some parts of the Continent, namely, that condyloma is a *primary* form of venereal disease, distinct from either gonorrhœa or syphilis, but equally definite and specific in its character with the latter affection. This opinion is now entertained in some of the principal hospitals of Russia, Austria, and Germany, where the affection is described as a primary disease, under the name of *feigwarzen.* My attention was directed to the investigation of this subject only a few months ago by Dr Koch, one of the physicians of the Hospital of St Paul and St Peter at Petersburg ; and I have since that time carefully examined the patients presenting themselves at the Lock Hospital labouring under this disease, with a special reference to the question of its primary and specific character, and have also, in every instance, endeavoured to reproduce the disease by inoculation. The following is the result of my observations and experiments, extending over a period of six months, viz. from 2d November 1843 to 2d May 1844.

The total number of patients admitted into the hospital during that period was 121, and the average number in the hospital was about 28, the whole of them being females. Of that number 36 were affected with condyloma, being about one in $3\frac{1}{3}$.

One of the symptoms which struck me as most remarkable, and present nearly in all the cases, was a peculiar hoarseness or huskiness of the voice. This symptom was much more marked in some than in others, but could be distinguished, I think, in all ; even in those in whom no morbid change was visible in the mouth, fauces, or pharynx.

The appearances presented on the genital organs and parts in the immediate neighbourhood, were moist, indurated, and somewhat elevated patches, of a whitish and occasionally yellowish white colour. Most of these patches were irregular in form, but a considerable number of them, especially of those on the labia and thighs, were rounded and prominent. They were situated most frequently along the opposite margins of the labia majora, on the perinæum, and verge of the anus ; less frequently on the outer surfaces of the labia and adjacent surface of the thighs, and on opposite and corresponding surfaces of the thighs, two or three inches below the labia. Many of them were the seats of superficial ulceration, or more frequently of vesication, the surface of the condyloma discharging a thin muco-purulent secretion. Those which were situated on the opposite sides of the

nates were less elevated, and presented a tendency to ulcerate in fissures as they approached the verge of the anus.

In two instances, three or four considerable condylomatous patches, white and elevated, although flat, were seen extending over the inner surface of the vagina as high as the cervix uteri.

In nearly all the patients, the mouth or fauces presented the appearances described by Dr Wallace as characteristic of this affection. These consisted in white and slightly elevated patches on the inner surface of the lips or angles of the mouth or cheeks; more frequently on the tonsils or arch of the palate; and not unfrequently on the tongue, sometimes on its edges, and sometimes on the dorsal surface near its root. So constant was the appearance of these milk-like patches on one or other of these parts, that I was in the habit, latterly, of examining the mouth and throat first, after noticing the husky voice of the patient, and almost invariably was able to detect some patch which enabled me to prognosticate that she was affected with condyloma of the genital organs before an examination was made. And in cases of condylomata of the genital organs, where the mouth or throat did not present these appearances at the period of admission, they were not unfrequently apparent soon after during the progress of the case. To this circumstance is to be attributed the fact to be immediately noticed, that in the journal of the cases rather less than one-half of the patients are noted as having had the throat affected.

In one or two instances only, and those were cases seen at an early stage of the affection, was the cutaneous eruption, described by Dr Wallace as a concomitant of the disease, observed. In those cases it presented the red-brown stain, the irregular form, and the tendency to scale off, or rather to desquamate, which seem to have been regarded by him as characteristic.

In only one instance did there exist a distinct condyloma in parts of the body other than those enumerated. This occurred in the case of a patient who presented a very large condylomatous patch in the left axilla.

Of the 36 cases, one or two were apparently complicated with syphilitic sores, as I was led to believe by the production of a pustule after inoculation, which had the appearance of those produced by inoculation from the true syphilitic chancre; others were complicated with gonorrhœa, as was proved by the history of its invasion and the appearances presented; and

others were complicated with a leucorrhœal discharge, as we ascertained by the use of the speculum.

Of the whole cases, 20 were accompanied with gonorrhœal or leucorrhœal discharges from the vagina. Of the remaining 16, five presented ulcers seated on the surface of the condylomata, of which one or two were suspected, from the result of the inoculation, the pustule being destroyed with caustic on its appearance, to be syphilitic. The remaining 11 presented neither gonorrhœal nor leucorrhœal discharges, nor ulcers, but were simple cases of condyloma. Of these 11, three were *undoubtedly* first affections, the girls not having had any previous venereal complaint. In five of them at least, I ascertained with as much certainty as the evidence of such patients admits of, that the disease *commenced* with the formation of the condylomatous patches or tubercles, and was not preceded by any sores or discharge, either mucous or purulent.

In 16 out of the 36, the throat is stated in the journal to have presented the characteristic appearance; but in nearly all the remaining cases the lips, mouth, or tongue, presented the condylomatous patches. These were most frequently seated in the angle formed by the commissure of the lips, occasionally on the inner surface of the lip or cheek. Those seated in the angles of the mouth appeared slightly excavated, and would in all probability have been described as ulcers by most observers, but they all presented the characteristic white or milk-like coating on the surface.

One patient was affected with iritis during the progress of the cure; two with inflammation of the lymphatic glands in the groin. Besides the cases referred to where the eruption described by Dr Wallace was present, one was affected with clustered lichen, one with rupia, and one with psoriasis venerea.

In 23 of the cases the duration of the disease, previous to admission into the hospital, was ascertained, and was as follows :—

Duration.		Cases.	Duration.		Cases.
2	weeks in	3	2	months in	7
3	...	3	3	...	2
4	...	4	4	...	1
6	...	4	5	...	2,

and in one case eight months.

The longer duration of the disease, previous to admission, did not apparently, *cæteris paribus*, render the cases materially worse than many which were of shorter duration, nor make the

cure more tedious. Of the two cases of five months' duration, one was cured in fourteen and the other in nine days. Two of the cases of two months' duration were cured in fourteen days, and one of the cases of three months' duration in seven days.

One or two of the patients were discharged for misconduct, some at their own request, and some remained under treatment at the date at which the report terminates; but of the remaining cases, 27 in number, the average duration, *i. e.* the term of treatment until they were discharged cured, was twenty-two days. Of these, two were in the hospital above two months, and eight between thirty and forty-five days, and in all of these cases the patients laboured under chronic discharges from the uterus or vagina, cutaneous eruptions, or ulceration of the throat. The average duration of the treatment in cases not affected with these complications was twelve days.

My treatment consisted chiefly in the application of stimulants to the condylomata; the use of astringent injections and cold washing, for the cure of the vaginal and uterine discharges; and in cases of the latter kind, the internal administration of tincture of cantharides. In several cases, when there existed cutaneous eruptions, the iodide of potassium was given. In no instance was any mercury administered, except in the case of the woman affected with iritis.

The local application which I have found most advantageous is the sulphate of copper. The condylomata were rubbed pretty freely with a crystal of this salt, moistened with water, every second day, and in some cases daily; and a lotion of it, containing two or three grains in each ounce of water, was kept applied by the patient. Under this treatment the condylomatous excrescences disappeared with remarkable rapidity. In the cases where there were ulcers suspected to be syphilitic, these were touched occasionally with the nitrate of silver. The patches in the mouth were repeatedly touched with the sulphate of copper or nitrate of silver, more frequently with the former, and disappeared with equal rapidity with those on the labia and perinæum.

Although the treatment in the Lock Hospital has been thus almost exclusively local, in such cases, for six or seven years, I have not remarked any tendency in the disease to recur after having been cured by this simple method of treatment; nor have the patients, although many of them have been under treatment for subsequent affections, presented any secondary

symptoms, except occasionally some of the eruptions mentioned in the previous description. The facility with which the cases under my care were cured, I attribute, in a good measure, not only to the effect of the remedies employed, but to the altered habits and circumstances of the patients. The regularity of the diet, the plain and wholesome food, the suspension of the universal habit of drinking, the attention to cleanliness, the rest enjoyed, and removal from night air, constant exposure, excitement, and fatigue, must in themselves, contrasted with the usual habits of prostitutes, tend to produce a marked effect on the diseases under which they may labour.

The observations recorded in the preceding pages have led me to the conclusion that this affection is a *primary form of venereal disease*, and that it is identical with *sibbens*.

With respect to the first opinion, I must admit that it is extremely difficult to obtain complete satisfaction, in the class of patients among whom I have studied this affection, as to the absence of any previous disease, gonorrhœal or syphilitic. Of the eleven cases which I have mentioned as having neither ulcers, gonorrhœa, nor leucorrhœa, after repeated examination and cross-questioning, I was only able to satisfy myself that the disease had made its first appearance in the form of a condylomatous tubercle, without any previous ulcer or discharge, in *five* of the patients. In three of the cases, the patients were undoubtedly labouring under a venereal affection for the first time. One of them, indeed, was under ten years of age. She presented a condyloma on the right labium, the surface of which was ulcerated, or rather vesicated, another on the verge of the anus, several patches on the tonsils, one on the lips, some of considerable size on the tongue. The disease was contracted by sexual intercourse. A companion of this girl, under eleven years of age, was similarly affected, although to a much greater extent, and in her the disease was contracted from the same source.

I was at one time strongly inclined to believe with Dr Hibbert, that this disease was " the engendered product of rank uncleanliness,"* for it is certainly most frequently met with in patients of the lowest class, and is generally accompanied with profuse and neglected discharges. But the number of cases in which I have seen it where there was no such discharge, have satisfied

* Edinburgh Journal of Medical Science, 1826.

me that this is not the sole cause, although it may be admitted that under its influence the disease is fostered and developed. My opinion on this point exactly coincides with that of Dr Wallace. " The want of habits of cleanliness," he observes, " has a great influence in determining the formation of fungi, of rhagades, and perhaps of onyxis. In fact, these symptoms are often produced by the dirty habits of patients, when the opposite habits would have prevented them. I do not, however, say that they never occur except in such habits, for I have known very cleanly persons to have the condylomatous form of disease."*

The invariable affection of the mouth and throat at some period of the disease—for I am satisfied it is invariable—with the peculiar and perfectly characteristic eruption, or condylomatous patches, in itself is sufficient to point out that this disease is specific in its origin, and essentially different from any of the secondary symptoms which are known to result from the syphilitic virus, or from any thing which can be produced by filth and gonorrhœa.

To satisfy myself, if possible, of the specific character and contagious nature of this disease, I inoculated in every one of the cases referred to from the matter, which can in general be scraped from the surface of some of the condylomata, or from the ulcers which they frequently present. The result of these experiments has been different from either that of Dr Wallace or M. Ricord, between whose results there also exists a remarkable discrepancy.

Dr Wallace states, that in " two or three weeks after" [inoculation], " the seat of the inoculation swelled and became somewhat red and painful. It then desquamated, or appeared scaly. The tumidness and scaliness increased. The scales then gradually became scabs or crusts, and the spot as gradually acquired a fungoid elevation. In a few instances the scaly tubercle, soon after its appearance, formed an ulcer. On other occasions parts of the fungous elevation ulcerated, and then its surface appeared depressed, or in wells."† He adds, that the secondary symptoms followed, the skin presenting the rubeoloid, or the scaly, or the tuberculated eruption, and the mouth the superficial form of the disease.

M. Ricord states, that in 221 inoculations from mucous tubercles or condylomata, no effects were produced in any case.

---

* Op. Cit., p. 751. † Op. Cit., p. 133.

N

On comparing the results of M. Ricord's inoculations with those of Dr Wallace, I was at first led to believe that the discrepancy was probably to be explained by the supposition that M. Ricord was not aware of Dr Wallace's experiments, or did not advert to the circumstance stated by him, that the inoculation did not take effect until two or three weeks afterwards, and that before that period he might have ceased to watch for any effects. The result of my own observations, however, is at variance both with this explanation and with the experience of Dr Wallace; for in the only cases in which my inoculations succeeded, the effect took place within one or two days.

Of the thirty-six cases referred to in the preceding part of this paper, inoculation succeeded in only four cases. In all of these the first appearance presented in the seat of the inoculation was a pustule on the second or third day, as in inoculating from a chancre. Believing that this had been the case in the first two or three experiments, I destroyed the pustule with nitrate of silver. In the fourth case I allowed the two pustules which formed to run their natural course; a scab formed, which appeared to be seated on sores depressed below the level of the adjoining surface, but without the elevated or hardened edges, or the defined circular form of chancre. They continued increasing in size, preserving the same appearance and covering, until they met each other and coalesced. On the fourteenth day after inoculation the crusts became detached, and a fungoid excrescence, having all the appearance of a condyloma, shot up from the sore. This was destroyed.

In another case, not included amongst the thirty-six referred to, inoculation produced the same effects as those last described; and the sore now presents a small fungoid elevation of the skin, somewhat resembling a condyloma. In addition to the results derived from direct inoculation, I may add, that I have had frequent occasion to remark the existence of a condylomatous tubercle on opposite surfaces of the thighs, at points exactly corresponding, and brought in contact when the thighs were approximated.

These results are as yet imperfect and unsatisfactory, but so far as they go, they are confirmatory of the observations of Dr Wallace, in as far as regards the appearances presented, although they are at variance with his results, both as regards the pustular form which preceded the scab and tubercle, and the period at which the inoculation took effect.

That inoculation took effect in so few of the cases experimented upon by me, may be explained, perhaps, partly by the fact that I selected a part of the thigh where condylomata are very seldom produced in the natural course of the disease, and partly, it may be, by my not having had recourse to any means to prevent the patient washing the inoculation immediately after it was done, to prevent its taking effect. Dr Wallace states that his inoculations succeeded much less frequently than inoculations from chancres.

The inference to be deduced from the experiments referred to, more particularly those of Dr Wallace, appears to me to afford strong corroborative evidence of the opinion which I have formed, that this affection is specific, and one of the primary forms of venereal disease.

The identity of this disease with the affection called *sibbens*, which at one time ravaged this country to a great extent, and is now generally believed to be nearly extinct, or confined to some limited localities in the west and north of Scotland, is, I think, very clearly made out by a reference to the descriptions of it which we possess. This question, or the question of the venereal origin of *sibbens*, is not likely to be encumbered now with arguments founded upon the possibility or impossibility of curing it without mercury, any more, I trust, than the syphilitic nature of any of the diseases met with in the Lock Hospital is to be doubted because they have been treated and cured there without any mercury for the last six or seven years. The question will be determined by the anatomical characters of the disease.

Dr Gilchrist, in an account published in 1765, of sibbens as it appeared in Scotland at a time when it was very prevalent, says, " It first appeared here in the form of a sore throat, or an inflammation of the *uvula* or *pap of the hawse*, as it is termed, and neighbouring parts. The tonsils were often superficially ulcerated, appearing either raw or covered with a *white slough*. Frequently there was a thrush, that is, *white specks and sloughs*, upon the roof of the mouth and inside of the cheeks and lips, which commonly showed itself at the corners of the mouth, in a *small rising of the skin*, of a *pearl or whey colour.*" * * * " Sometimes there was a hoarseness."—" Scabby eruptions were often met with on the scalp, forehead, inside of the thighs, groins, and parts contiguous."—" The whole surface of the body appeared mottled or flaked, of a dusky copper colour, or dirty

red."—" Inflammation, sorenesses, and excrescences about the fundament were frequent."*

In an account of the disease " falsely called the *yaws* in the south of Scotland, and *sibbens* in the north," by Mr James Hill, surgeon in Dumfries, written in 1768, after referring to the verrucæ, condylomata, and tubercles met with on the perinæum, scrotum, and various parts, and citing the descriptions of Dr Harvey, Wiseman, Turner, Dr Barrie of Cork, Van Swieten, Plenck (all whose cases, he says, are sibbens), and Boerhaave, to show that the distemper called *venereal syphilis* or *French pox* in France, Germany, Holland, England, and Ireland, is the same as the Scotch *sibbens*, he describes its appearance in the mouth in the following graphic terms :—" When the infection is communicated by a foul pipe or spoon, the angles of the mouth, the lips, gums, &c., are first affected. The first appearance of an ulcer on the lip, &c., exactly resembles a bit of fine white soft velvet pasted upon the skin ; for it will not wipe off. But after it has eaten in for some time, it then has the appearance of a piece of the red skin cut out, and a white velvet patch put in its place. These ulcers spread broader than deep."† To prove its identity with *syphilis*, he refers to a case of " clap" in a female, " attended with verrucæ, which she called hæmorrhoids," and who communicated sibbens to nine of his own relations.

Dr Adams visited Scotland, as a " means of assisting his inquiries into morbid poisons," for the express purpose of examining the sibbens, believed then, as it still is, to be prevalent only in the south-west of Scotland. The description of the patients whom he saw confirms the opinion which I have formed of the identity of the diseases. One female had lost her uvula and tonsils, her voice was affected, and, adds Dr Adams, " the loss of substance about the lips is very trifling, but the edges are covered with an opaque white cuticle, apparently newly formed." * * * " She had at one time complaints about the anus." Of another female whom he examined, he says, " The uvula and tonsils were suffused with a viscid mucus, and in some parts covered with the white appearance before mentioned. The soreness extends from the edge of the lips along the inside of the cheek and side of the tongue ; but if there be any loss of substance, it is only at the uvula and tonsils, which appear rather wasted than ulcered."

---

* Physical and Literary Essays, vol. iii. p. 154-177. Edinburgh, 1771.
† Cases in Surgery, by James Hill, Surgeon, p. 258. Edinburgh, 1772.

She had also a cutaneous eruption, of which Dr Adams says: " These are small elevations above the cuticle; she showed me some on her legs and arms, which *seemed* pustular, but were quite dry."* Other cases are referred to of a similar kind, from a review of which he arrives at the conclusion, that sibbens is different from the venereal disease. Its prevalence in Scotland is explained by Dr Adams by reference to the habit, which, he says, was peculiar to some districts of Scotland in those days, of smoking out of a common pipe—of " using a single pipe for a whole family, and almost for a whole village"! The tradition regarding the origin of the disease in Scotland was, that Cromwell's soldiers had introduced it and the smoking of tobacco at the same time, by means of their pipes.

The idea generally entertained of this disease by, I believe, all who have written on the subject, in common with Dr Adams and the writers referred to, that it is communicated by kissing, or by drinking out of the same vessel or smoking out of the same pipe, I am inclined entirely to discredit. I believe it has arisen, along with the idea that this is a disease which chiefly or solely, in some instances, affects the mouth, from the fact that in every case the mouth is more or less affected at the same time as the genital organs. The affection of the mouth is one of the constitutional effects of the disease, to be observed, I believe, in every case of condyloma at some period of its course. And I have little doubt that the erroneous ideas generally entertained regarding the nature and mode of propagation of this disease, have originated in the desire on the part of those affected with it to conceal the real origin of their complaint. Had the genital organs been examined in every case where the mouth was affected, I believe the medium of contagion would have never been suspected to have been merely kisses, tobacco pipes, or common drinking cups.

Mr Carmichael, believing with Dr Adams that this disease was endemic in Scotland, particularly in the western part of it, conjectured that it must be frequently transmitted to Ireland, and accordingly he recognised its frequent, almost daily, occurrence in the Lock Hospital of Dublin. These were undoubtedly cases of condyloma, and not more peculiar to Dublin, if the account given by Dr Wallace of his exanthematic syphilis is correct, than to the west of Scotland.

* On Morbid Poisons, by Joseph Adams, M.D., p. 183-8. London, 1807.

The limits of this paper prevent me from endeavouring to trace the identity of this disease with the venereal affections described by the older writers, but I cannot avoid remarking that one can scarcely refer to any old work on syphilis without a conviction that it has been very generally described and confounded with syphilis.   To take *e. g.* at random a single observation from a small work by Dr Saunders, to which is appended the tract by Professor Plenck on the action of mercury on the salivary glands : " A child of a year and a half old, whose parents were not venereal, had for half a year condylomata about the anus, rhagades, and small ulcers in the angles of the mouth," &c.* One can hardly resist the conclusion, that a more careful examination of the subject will show that sibbens is as familiar as syphilis, and as little peculiar to certain localities, and that it has been overlooked or ascribed to the secondary effects of that disease.

The most recent account of sibbens, as it prevails in Ayrshire, Galloway, and Dumfriesshire, is contained in a very interesting paper by Mr Wills of Cumnock, published in April last,† which I have just seen for the first time.   On perusing it I was gratified to find all my preconceived opinions, regarding the identity of the *condyloma,* daily met with here, with the *sibbens* of the west, confirmed and verified.   The appearance of the tubercles, or condylomata, on " the tongue, cheeks, angles of the mouth, anus, groins, and genital organs," and of the cutaneous eruption or secondary symptoms, given by Mr Wills, is exactly applicable to the cases daily seen in the Lock Hospital of this place.   While I differ from him regarding the necessity for the use of mercury in the cure of this disease, and regarding the mode in which the affection of the mouth is produced, his views entirely coincide with mine on most of the other points of interest.   " Between sibbens," he says, " and the venereal condyloma, there does not appear any difference ; and I will be much astonished indeed if, on farther inquiry, the latter is not found to be often communicated by the mouth.   Whether sibbens may have wandered from our mountains to the cities, or venereal condyloma from towns to us, is not for me to decide."

Mr Wills recognises the resemblance between sibbens and the disease described by Mr Johnson as venereal condyloma,

---

* A New and Easy Method of giving Mercury, &c., by William Saunders, M. D., p. 83.   London, 1768.

† London and Edinburgh Monthly Journal of Medical Science, April 1844, p. 282.

A PRIMARY FORM OF VENEREAL DISEASE.

in such terms as to satisfy me that little remains to be done to establish the identity of the two; although I am still inclined to believe that the idea of the Cumnock disease being propagated by contact of the lips or tobacco pipes is fanciful, and founded upon a limited view of the constitutional symptoms of the affection. " Mr Henry James Johnson, in the April number of the Medico-Chirurgical Review for 1834, in giving an account of this fungoid venereal sore, under the name of venereal condyloma, has presented so minute and faithful a description of sibbens, as it at present exists in this part of Scotland, as almost to make me doubt if that gentleman had not his model from Ayrshire, with this difference, that what he calls a secondary affection is our primary. This is easily accounted for. Mr Johnson has been in the habit of seeing the disease in the form it assumes when *got by coition;* we again commonly meet with it as *caught by contact of the lips*, or through the medium of tobacco pipes, &c. Sibbens, however, are frequently communicated by coition; and then the disease has all the characters of venereal condyloma." And again, " Their appearance on the female parts of generation is so accurately described by Mr Johnson, that I would only be copying that gentleman's words in attempting a description; but I may take this opportunity of stating, that sibbens caught by coition are not always accompanied with gonorrhœa, and are oftener without than with that discharge, particularly in males."

From the preceding observations and experiments, I think myself warranted in deducing the following conclusions as highly probable if not completely substantiated :—

1. That condyloma is a primary form of venereal disease—specific in its characters and its origin, and distinct from gonorrhœa or syphilis.

2. That it is identical with the disease described under the name of sibbens or sivvens.

3. That it is communicable by contagion and inoculation.

4. That the difficulty of producing it by direct inoculation, and the similarity of the affection of the mouth in cases produced by sexual intercourse with that in which it has been supposed to be produced by contact of the lips, &c., render it probable that the affection of the mouth is always a constitutional symptom resulting from a venereal origin.

5. That it is curable without the use of mercury.

Before concluding, I take this opportunity of acknowledging

my obligations to Mr Benbow, the present active and intelligent house-surgeon to the Lock Hospital, for the efficient assistance which he rendered to me in the investigation of this subject, in the cases referred to as reported and experimented upon there.

Case of Death by Rupture of the Lung from Violence without Injury of the walls of the Chest. By WILLIAM TAIT, M.D., Surgeon to the Edinburgh Police.

ON the 18th of March last, I was called about noon to the West Port, to see a girl who was reported to have been run over by a parcel-van, and to have received considerable injury. Having accidentally met a medical friend on the street, I requested him to accompany me, and we examined her together. She appeared an interesting child, about three years of age, well formed, plump, and healthy.

The clothes having been previously removed, every part of the body was carefully examined, and no external injury was observed, with the exception of a slight abrasion of the cuticle over the deltoid muscle of the left arm, and a faint livid line, about an inch broad, extending from this to within two inches of the elbow, and a spot of ecchymosis, about two inches square, over the crest of the left ilium. The breathing being much affected, and considerable pain being produced by a full inspiration, our attention was specially directed to the state of the ribs and the vertebral column, but not the slightest crepitus or other indication of fracture could be discovered.

She was reported by the parents to have been spitting blood before our arrival, but we had no positive evidence that this had come from the lungs, and were of opinion that it had flowed from a slight bruise of the gums, from which blood still appeared to be oozing. On applying the ear to the left side of the chest, a combination of the mucous and crepitating rattles was distinctly perceived, and we considered it probable that the lung had sustained some injury, but were not inclined to view it as of a very serious nature, as the wheel of the van did not appear to have passed over the chest.

The child was put under the charge of the medical attendant of the family, was freely leeched on the chest, but died on the evening of the following day, about thirty-five hours after the

accident,—having for several hours before death expectorated a considerable quantity of blood.

The driver of the van having been apprehended on a charge of careless driving, Dr Weir and I, by virtue of a warrant from the magistrates of Edinburgh, made a post-mortem examination of the body on the afternoon of the 20th, the day after death. The traces of ecchymosis, on the external aspect of the left arm, and on the crest of the left ilium, were then more distinct than when examined immediately after the accident had occurred, but no additional mark of external injury was observed. On laying open the different cavities, the brain and abdominal viscera were found to be quite healthy, but more blanched than usual. The left cavity of the chest contained fully a pound of fluid venous blood, and the lung was considerably collapsed. There was a rupture of the left lung fully four inches in length, commencing about the middle of the anterior margin of the superior lobe, and extending across the lung. From the inner extremity of the wound a second rent, about two inches in length and more superficial than the former, extended forwards in the direction of the margin without reaching it, so as to give to the rupture the form of the letter V. The portion of lung situated between the extremities of the letter was almost detached, and turned back in such a way as to appear at first sight altogether unconnected with it. A considerable quantity of blood was found effused into the parenchyma of the lungs, and also into the bronchi. Lymph was effused upon the surface of the pleura pulmonalis; and a circular patch of ecchymosis was observed upon the external surface of the pericardium, corresponding with the left ventricle of the heart.

From these appearances, we gave it as our opinion that the child had died from the loss of blood, consequent upon the lesion of the lung; and that this injury itself was probably the result of severe pressure, applied externally at the moment of a full inspiration.

Whether the opinion as to the cause of death, or the manner in which the wound of the lung had been produced, be correct or not, this case is interesting in its medico-legal bearings, in so far as it confirms the fact, already ascertained, that there may be fatal lesion of an internal organ from force applied externally, while not the slightest indication of violence can be observed on the surface of the body. Cases illustrative of internal rupture without outward mark of injury, are related by Drs Geoghegan, Watson, Williamson, Henke, Taylor, &c. The abdominal viscera,

however, appear to suffer more frequently in this way than the lungs. In the latter it is comparatively rare, as might be anticipated from their being better protected, and their peculiar tissue being less likely to suffer from pressure than any other organ contained in the body. From experiments made upon the lungs of animals, we are satisfied that very severe pressure will not produce a rupture of these organs, and that some other agent must have been called into operation to produce it on the occasion referred to. The part of the lung injured appeared to have been compressed or twisted between the opposing forces. Had it been possible for a part of it to have become wedged between two of the ribs, it would at once have explained the mode in which the injury had been inflicted; but conceiving this to be physically impossible, any suggestion which we are prepared to advance in order to account for it must be very unsatisfactory.

A case came under my notice in May 1843, of a woman who died from rupture of the spleen and effusion of blood into the peritoneum. Both she and her husband were much intoxicated, when a quarrel ensued. The husband attempted to kick her, and she fell on the edge of a table. She died three days after. On an examination of the body, no marks of ecchymosis were observed but on the arms and shins. When the abdomen was opened, coagula of blood were found floating amongst a quantity of serum, and coagulable lymph in the cavity of the peritoneum, which were discovered to have come from a rupture of the spleen and its peritoneal covering, about three inches in length.

NOTE BY THE EDITORS.

As remarked above, the rupture of the lung is much more rare, under such circumstances, than that of the heart and abdominal organs.

Dr John Gairdner of Edinburgh, in the Edinburgh Medico-Chirurgical Transactions, reported an interesting case, where the injury arose from the wheel of a loaded cart, as in the above instance. The accident occurred in a girl ten years of age, and her death was immediate. " There was scarcely any perceptible trace of the impression of the wheel externally, and no subcutaneous extravasation, except a very slight one under the left nipple.

" In the thorax, the only deviation from the healthy state was the rupture of the heart, with extensive laceration of its sub-

stance. Both ventricles and both auricles were laid open by the laceration, and the septum was torn to shreds. About one-half of the substance of the heart had burst a way for itself through the pericardium into the right cavity of the thorax, where it was found immersed in a very large quantity of grumous blood, and still attached to the other parts by means of a small portion near the apex, where the rent had stopped."*

Notwithstanding the extent of the rupture, as in the above case, there was hardly any mark of hurt externally, and no rib was in the slightest degree injured.

This case at first sight appears to come very close to that above reported; but while there was rupture of the heart, the lung appears to have been uninjured. And a considerable number of cases besides are recorded, in which the heart was ruptured under similar circumstances.

The liver, the spleen, the kidney, the intestines, have been also frequently ruptured by external violence without any marks of injury on the surface. But authors appear to have been rather rash in stating the same to be true of the lungs. It seems likely that the lung cannot be ruptured under such circumstances, or without fracture of the ribs, except in very young children. We cannot call to mind a distinct case of rupture of the lung anywhere recorded similar to that above reported. And on closer inspection, those commonly referred to under this head will be found to be less cases of rupture than of wound. Beck, whom nothing in general escapes, refers to the Medical Gazette† alone for evidence of rupture of the lung without external appearance of injury; but the writer in the Gazette, in the case alluded to, refers the breach in the lung to perforation by a fractured rib. Again, one of the writers in the Gazette refers to Morgagni for a case of the same kind. But Morgagni does not state what the condition of the surface was, and describes the ribs as being extensively depressed and fractured, at the same time that there was an aperture in the lung.‡ Morgagni's case may be a case of rupture, but the evidence afforded in the report is far from satisfactory.

---

* Edinburgh Medico-Chirurgical Transactions, vol. i. p. 662.
† Vol. xv. pp. 668, 727, 729.
‡ For some valuable observations on the conditions under which blows produce different effects, see the " Medical Jurisprudence of Blows and Contusions," Probationary Essay, by David Skae, F.R.C.S.E. 1836.

On the ready Curability of the more acute Form of Hydro-
   cephalus, in its earliest Stage, under active Treatment; with
   a Case. By ALEXANDER HARVEY, M.D., Lecturer on the
   Institutes of Medicine in Marischal College and University,
   Aberdeen.

IT is on all hands admitted that the acute hydrocephalus (using
that term as equivalent to acute inflammation and its effects, of
the brain or its membranes) shows little or no tendency to a
spontaneous favourable termination, and very quickly passes into
a state which, although not absolutely intractable by remedies,
nor inevitably fatal, is yet very little under their control, and
very seldom recovered from.

There is considerable difference of opinion, however, as to the
degree in which it is amenable to remedies within the first two
or three days from its outset. Formerly, when as yet the true
nature and the proper treatment of the disease were unknown or
imperfectly understood, it was very generally believed that even
at that early period the genuine hydrocephalus is singularly little,
if at all, susceptible of the influence of remedies of any kind.
This persuasion, however, of its peculiar obstinacy does not now
obtain, at least to that extent, or is entertained by comparatively
few, and the greater part of the profession seem to look upon it
as neither so intractable nor so fatal as it was viewed by the first
writers on it.

But this mere general admission in favour of the curability of
the disease is made with very different degrees of readiness by
different practitioners. Some very competent observers seem to
be decidedly of opinion that, within the period specified, the
more acute and well-marked form of it yields comparatively
readily to active treatment, particularly copious and repeated
blood-letting and full purging ; and to have satisfied themselves
of the actual accomplishment of a cure, in their own practice and
under such treatment, in a *considerable proportion* of cases, or
even in *the great majority* of cases.

I apprehend, however, that the great bulk of the profession
have no such lively persuasion of the curability of the disease,
nor any such confidence in the efficacy of treatment, even in its
more acute form and in its earliest stage ; and that it is a fair
account of their experience to say, that, of the cases of that kind
seen by them from the commencement and then brought under

treatment, although more or fewer of them recover, the larger proportion terminate fatally.

And there are still, as formerly, not a few, though few comparatively, who have either strong misgivings or are positively sceptical as to the curability of the genuine hydrocephalus at any period or in any form. Their own experience of it has, perhaps, been so uniformly unfavourable as to have created or strengthened a conviction in their minds of its being almost necessarily fatal; and so strong is that conviction, that they do not hesitate confidently to avow their belief that those of a contrary persuasion are either singularly credulous, or greatly deceive themselves in regard to the evidence on which that persuasion is founded; and that the cases adduced by them as examples of hydrocephalus cured in its earliest stage had not been cases of that disease at all, and are " remarkable only for their singular resemblance to it."

And there is yet another, and perhaps a still larger class of practitioners, who do not question abstractly the curability or even the ready curability of this disease during the short period specified, but doubt or deny the possibility of *recognising* it at that time, except in a very few cases, with sufficient certainty to *warrant* active interference, and condemn perhaps, or at least practically disregard, the principle of being guided in the treatment of doubtful cases by probabilities of a low kind as to their real nature. In regard to many of the cases which come before them, they may from the first have strong suspicions—suspicions which are often painfully justified afterwards; but they do not feel themselves called upon, on the faith of these, to subject their patients to the active treatment which they would at once adopt were they fully satisfied that they were labouring under actual hydrocephalus. Their experience of the disease, accordingly, is perhaps as unfavourable as that of the preceding class; but they attribute their want of success, not to any peculiar obstinacy in the disease to the influence of active treatment, but to the impossibility of making out the diagnosis in its early stage.

Nothing is more certain than that the settled convictions of our minds in regard either to the curability of the disease or the diagnosis of it, in its early stage, will very materially influence, though insensibly it may be to ourselves, our conduct in this department of practice. And, accordingly, it will be found, I

apprehend, that those who entertain a confident persuasion of the ready curability of the disease, at the period and under the treatment already mentioned, and are impressed with the importance of being satisfied, in judging of the diagnosis, with indications much short of certainty, are at once prompt and energetic in their practice; that those who are more or less sceptical as to its curability, or require rather clear evidence of its existence, are so far influenced thereby, in cases at least which are at all doubtful, as to decline or defer any very active or decided practice; and that those who, though agreeing generally in the views of the former class, are less confident in their apprehension of them, and less sanguine as to the general efficacy of bold and energetic practice, are proportionally less prompt and decided in their treatment.

And what if the views of the first class, and their statement of the successful results of practice, are well founded? What if it be true that hydrocephalus, in its more acute form and in its earliest stage, is readily amenable to active treatment, and that its diagnosis may in general be then made out with sufficient confidence to warrant such treatment? And what if the views of the others are erroneous, and their unfavourable experience of the disease attributable to inefficient practice, or to active practice either too long deferred or carried to a degree short of what the disease requires? These are obviously questions of the utmost *practical* importance.

Being myself satisfied that the evidence adduced and relied on by those who believe that these questions admit of an affirmative answer, has stronger claims on our consideration than many suppose, or at least that " *it is not so clear a case that there is nothing in it,*" I think it might not be amiss, for the sake of those who have never carefully examined it, to lay that evidence formally before them, and to urge upon them whether, if, upon a due consideration of it, it shall not appear altogether satisfactory to their minds, it is not, at all events, such as to require of them a line of conduct nearly, if not exactly, the same as if it were in the highest degree conclusive; and whether, also, it is not our duty, in dealing with a disease of so intractable a character when fairly established, and so hopeless when left to itself, to act in doubtful cases upon indications of a slight nature, and on low probabilities as to their curability in all cases, and not decline or defer the adoption of active treatment till we have some

sort of *certainty* as to the nature of the cases on the one hand, or on the other, *clearer* evidence than yet appears of the efficacy of such practice.

It is certain, indeed, that if we are habitually guided in our treatment of this class of cases by such principles as these, " it will be impossible for us to say how many of those cases which under active treatment terminate favourably, would otherwise have ripened into well-marked hydrocephalus ; and we must be content to have it said, without its being possible for us to refute the assertion, that not all of the disorders which we treat as acute hydrocephalus are really instances of that complaint."* Nay, doubtless, it must happen that, acting on such principles,—guided often in a great measure by conjecture,— " not waiting till the nature of the symptoms *demonstrate* that the malady is present, while they demonstrate also, at the same time, that it is well-nigh hopeless,"† we shall occasionally subject patients to a plan of treatment which, could we get behind the scenes, we should perceive to be unnecessary. But in regard to this disease, it is especially important to remember that " *probability is the very guide of life,*"‡ and that " in those diseases in which most can be done by art, our practice must always be guided in part by *conjecture*, because, if we wait for certainty, we very often wait till the time for *successful* practice is past."§ And, if err we must at times, better far the reflection, at the close of our professional life, that if chargeable in this particular instance with the *nimia cura medici*, we have at least lost comparatively few cases of acute hydrocephalus seen by us from the commencement, than that of being guiltless in that respect, but of having lost many such cases.

I propose, then, to state somewhat formally and in detail the evidence in favour of the belief which is entertained by some very competent authorities, that the hydrocephalus, in its more acute form, is, in its earliest stage, very generally amenable to active treatment, and that the diagnosis of that form of it may generally be made out at that stage with sufficient confidence to warrant active interference.

I must defer doing so, however, till a future occasion, and

* Watson's Lectures on the Practice of Physic, p. 428. † Ibid.
‡ Butler's Analogy, Introduction.
§ Alison, History of Med., Cyc. of Prac. Med., vol. i. p. lxxxvii.

will in the mean time conclude these remarks with the following case, which fell under my care very recently, and which in my opinion admirably illustrates the force of them.

CASE.

A young gentleman, ætat. fourteen, one of a family of whom three had died of hydrocephalus, and himself sufficiently remarkable for the "acuteness of his senses, and the activity of his mental powers of observation and apprehension," so often seen in the victims of that complaint,—after being confined to the house for some days on account of a slight cold, began to complain the week following of acute pain in one of his temples, attended with some quickness and sharpness of pulse at night. For these symptoms he was again confined to the house, and smartly purged. On the third day thereafter, the pain had considerably abated, and on the morning of the fourth he seemed to be quite well.

On the evening of that day, however, the pain returned, and besides being as acute as formerly, now affected both temples and the forehead. On seeing him next morning, I learned that he had passed a restless night, and had been frequently wakened out of sleep by the severity of the pain; and that the pain itself, while more acute than that of ordinary headach, darted at times through his head in stounds or twinges, was easiest when he lay quietly in bed, and much aggravated on moving his head or assuming the erect posture. His head felt sensibly warmer than natural, but there was no throbbing of the temples nor flushing of the face, and his pulse was tranquil. He had been much sickened by some medicine he had taken at bedtime, and had vomited several times in consequence; and this was observable as the effect of the medicine he had taken in the earlier part of the week.

These symptoms—especially the character of the pain—taken in connexion with his presumed tendency to hydrocephalus, seemed to me to warrant suspicion of their being dependent on incipient inflammation within the head. I therefore immediately bled him from the arm to the extent of ten or twelve ounces, with the effect of inducing faintness, sickness, and vomiting. Thereafter I had his hair cut short, and cold assiduously and effectually applied to the head, and prescribed for him strong purgative medicine. The pain of the head was considerably relieved by the

bleeding. The blood drawn was very distinctly buffed. The medicine sickened him a good deal, but purged him fully and repeatedly in the course of the day.

Next morning, the pain of head, though much easier, still continuing to come in stounds, I again bled him from the arm to the same extent, and with the same effect, as yesterday. This bleeding entirely and at once removed the pain. The blood was even more sizy than on the former occasion, and much contracted. The purging was kept up briskly, and the cold applications to the head were continued.

The pain did not again return; he regained his strength rapidly; and in less than a fortnight was allowed to resume his wonted occupations.

The distinctly inflammatory appearance of the blood drawn strengthened my suspicion that the case was one of inflammation within the head, in its first stage; and the rapid abatement of the symptoms consequent on the bleeding and purging, and the speedy convalescence, notwithstanding the weakening effect of these, heightened it still more, as indicating that an inflammatory disease had been *cut short.**

Should any one, however, dispute the inference thus drawn as to the nature of the case, I shall not insist upon it. I at once admit that the inference is only a probable one; and that, had the pain been more distinctly violent—shooting through the head with such intensity as to cause screaming—had there been marked sickness, and vomiting of all or nearly all ingesta, delirium, and quickness and sharpness of pulse, my own mind would be much better satisfied in regard to it. I take leave, however, to remark, that the symptoms were precisely similar to those attending the commencement of many cases which have ended in fatal hydrocephalus, and in particular to those described by Dr Abercrombie as constituting his fourth and fifth variety of this class of head affections; and that, unless such a one is disposed to deny the inflammatory nature of that disease, or, admitting this, to deny the curability of it, even in its early stage, he cannot surely refuse allowing, that the whole circumstances of the case were such as not only to justify the treatment adopted, but imperatively to demand it.

ABERDEEN, *May* 17, 1844.

---

* Brit. and For. Med. Review, vol. iii. p. 307.

Unusual Termination of a Case of Congenite Hydrocephalus.
By WILLIAM CAMPBELL, M. D., Lecturer on Midwifery, and
Consulting Physician-Accoucheur to the Maternity Hospital,
Edinburgh.

MRS BROWN, æt. twenty-two, healthy, among the industrious
classes, produced, on the 2d of April of this year, in her second
confinement, a large female fœtus affected with hydrocephalus.
The male parent was healthy, and twenty-four years of age.
During labour the breech presented ; and the transit of the
fœtus was so tardy, that Mr William Malloch, a very intelligent
pupil, who had the management of the case, deemed it necessary
to request the assistance of Dr Cochran, a neighbouring practi-
tioner. After a good deal of active traction, a still-born child
was extracted. The head was much enlarged, greatly elongated,
and so squeezed together, owing to the compression to which it
was subjected while it was being dragged through the pelvis, as
to resemble a tin kettle or canister which had been exposed to
much pressure ; and although from its great expansion it was
evident that it must have contained a considerable quantity of
fluid, yet it seemed nearly empty. There was a spina bifida
of considerable magnitude formed on the sacro-lumbar junction,
which had been burst during labour, and through which the fluid
contents of the cranium, passing along the spinal canal, made its
escape. Some years ago, in an infant affected with spina bifida,
the pressure of the hand applied to the tumour was observed to
cause the young subject to become comatose ; and hence there
was satisfactory evidence that a communication existed between
the tumour and the brain.

After the cranium in the foregoing case was distended to the
volume which it possessed previously to the escape of its contents,
it measured, by callipers, after being denuded of the soft parts,
—from the chin to the anterior angle of the left parietal bone,
$6\frac{1}{3}$ inches ; from the chin to the posterior angle of the same bone,
at the extremity of the sagittal suture, $6\frac{1}{2}$ inches ; from one pa-
rietal protuberance to the other, $5\frac{3}{4}$ inches ; and in circumference,
$18\frac{3}{4}$ inches. Its parietes are, to a great extent, membranous ;
the parietal bones much expanded ; the forehead projects, the
face is sunk in as it were, and is remarkably small compared
to the size of the head. This fœtus, contrary to the character
of every production of this nature that I have hitherto seen, was

very fully developed. No reason has been assigned for the foetus being diseased, except that, according to the statements of the mother, she has been subject to much vexation during gestation, in consequence of the irregular habits of her husband: no hereditary disposition, as is strikingly manifest among the progeny of some families, could be traced. This is not the only instance of congenite hydrocephalus that I have seen, arising under the influence of protracted mental emotions and irregularities on the part of females during gestation; and I presume it must be familiar to the profession, that a diseased offspring is not unfrequently produced under such circumstances.

EDINBURGH, 4 PICARDY PLACE, 20*th* *May* 1844.

Observations on Dr Campbell's *Paper on Congenite Syphilis, in the First Number of this Journal.* By W. ACTON, Esq., of Queen Anne Street, Cavendish Square, London.

IN my work on venereal diseases, I ventured to call in question the truth of several ancient dogmas held in great veneration by accoucheurs of the last century, and which I was inclined to believe were admitted on too slight grounds by some even in the year 1840. In the last number of the Northern Journal I find Dr Campbell somewhat indignant at my questioning these opinions, which he states " *men of experience, who have been engaged in practice half a century or more, maintain to be true.*" On this occasion I purpose stating the points of difference between Dr Campbell and myself. I believe that accoucheurs are in error in attributing solely to syphilis the occurrence of abortion about the seventh month, and my reasons are the following :—

1*st*, In the wards of hospitals devoted to venereal female patients, labouring under secondary symptoms, abortions are not more frequently observed at the seventh month than at any other period; 2*dly*, These females, in spite of all moral and physical impression, frequently carry their children to the full period; and at the time of birth we meet with the infant quite healthy, or only sickening some weeks after. Such being the natural course of syphilis when observed on a large scale, I have hesitated in concluding that syphilis produces abortion at the seventh month, or

that the circumstance of a child being born dead or putrid is of itself of any value in the diagnosis.

Dr Campbell, on the contrary, is an implicit believer in the opinion, that when women miscarry about the seventh month, and the child is putrid, we must look to syphilis as the cause, and that a cure will be effected by giving mercury to both parents : the reason he assigns for this belief is, having witnessed the occurrence very frequently ; and he gives the two following cases in support of his opinion :—

A physician contracted what he believed to be a chancre ; six months after he married ; three children were successively prematurely born ; the first lived only a few hours ; the second infant was born between the sixth and seventh month, and lived eight hours ; the third labour came on in the seventh month, the fœtus dead and decomposed ; no trace of syphilis was observed in either parent ; the father and mother were salivated, and the next child was born vigorous and free from any syphilitic taint.

2d Case.—Seventeen years previous to marriage, a gentleman suffered from syphilis, which he was assured was cured, although an impression remained on his part that the disease had not been completely removed ; both parents were apparently in perfect health ; the first child was born in the early part of the eighth month of gestation, was delicate, and lived eleven days ; the second birth happened in the seventh month, the infant survived only an hour and a half ; the third delivery occurred in the sixth month, when a fœtus much decomposed was produced ; the husband and wife were salivated, and a living healthy small female fœtus was born at the close of the eighth month.—Having related these two cases, Dr Campbell criticizes my opinions, and states, 1st, That information derived from venereal hospitals is, to say the least, questionable ; 2d, That my field for observation was far too limited, considering that, on an average, not more than six prostitutes in one thousand conceived in the course of one year, according to the investigations of Duchatelet ; and, 3d, That opinions based on such data cannot be put in competition with the experience of men who have been half a century or more engaged in practice.

The reader must observe, that if Dr Campbell admits syphilis as the cause of abortion in the above-cited cases, he will be obliged to believe that two parents, neither of whom have had secondary symptoms, but enjoy excellent health, will produce

not syphilitic children in the sense usually understood by authors, but infants that present no recognised syphilitic symptom, unless premature confinement or a putrid fœtus be considered as such; thus excluding all other causes of abortion, and recognising as the cause a chancre without any of its attendant sequelæ.

In the second case, he must believe that chancre, unattended by secondary symptoms, will, after seventeen years, show itself in the child, not in the ordinary forms, but in that which ac-coucheurs affirm is syphilis, consisting in the death of the fœtus and premature confinement. This doctrine will, I think, be at once denied by all practitioners who have allowed their patients to marry, and observed the healthy offspring of those who in early life contracted chancres not followed by secondary symptoms. In reply to Dr Campbell's first objection to my opinions, I must repeat, that a large number of pregnant women were under my care at the venereal hospitals in Paris, but that *I did not observe* this liability to abortion during the seventh month.

Dr Campbell's statement, on the authority of Duchatelet, that only six prostitutes in a thousand *conceived* in the course of one year, appeared so much at variance with what I had witnessed, that I referred to his book, and find, as I expected, that Dr Campbell has completely misunderstood the French author, who, at the commencement of the chapter (De la Fécondité chez les Prostituées), says, " En resumant toutes les réponses qui m'ont été faites, et ce que j'ai trouvé dans *quelques* livres anciens et modernes, j'ai du tirer cette conclusion, que mille prostituées fournissent à peine six *accouchements** dans la courant d'une année ;" which I should translate as follows : " Judging from the answers I have received, and what I have found in *some* ancient and modern works, I ought to draw this conclusion, that a thousand prostitutes scarcely furnish six *accouchements* during the course of the year." He, however, in the next line goes on to say that, not satisfied with these data, he made further *personal* investigations ; and at page 233 he gives a table to show that the *accouchements* which take place in the hospitals are on an average 51½, and a few lines farther on he augments it to 63½ ; at page 241 he adds, " tout semble donc prouver que les prostituées sont plus aptes à la fécondation qu'on ne l'a cru jusqu'ici." I hope, then, Dr Campbell will now give me credit for having observed

---

* I have marked the word *accouchements* in the text, as well as *quelques*, and conclude that Dr Campbell is well aware that the French word is not rendered into English by *conceived*.

on a larger scale than this misquotation would lead his readers to suppose.*

If I understand Dr Campbell's third objection to my opinion, it is, that none of his juniors ought to dispute his opinion unless he can back it with the experience of half a century. With all deference to the doctor's years, I must, however, remind him that, in these sceptical days, a host of things (the truth of which was formerly never doubted) are now held in disbelief; that a stern array of facts and figures, with strict observation of the ordinary course of disease, is now required to defend an old doctrine or support a new opinion; and that the heads of the profession must condescend, like their juniors, to employ these means, and not only count their facts and opinions, but weigh them.

46, QUEEN ANNE STREET, CAVENDISH SQUARE,
    LONDON, *May* 1844.

NOTE BY THE EDITORS.

Though we are determined, as far as possible, to prevent this Journal from becoming a field for acrimonious personal controversy, we are equally resolved that no one shall have just cause to think himself aggrieved by our articles, or those of our contributors, without having ample opportunity of setting himself right with our readers. We have therefore published Dr Acton's answer to some passages in Dr Campbell's paper, in our first number, on Congenite Syphilis. We observe that Dr Campbell did expressly refer to Dr Acton as one of those who maintained the opinions against which his paper was directed; yet in doing so, we consider Dr Campbell as having paid a compliment to Dr Acton's recent work, since that was singled out as one of the works of reputation in which such opinions were entertained. And we remark nothing in Dr C.'s article, in reference to Dr Acton, which can make us regret its having obtained our imprimatur without erasure; neither do we discover in Dr Acton's answer any deviation from that gentlemanlike style in which scientific controversy should be carried on between one member of a liberal profession and another.

On the present occasion we have no intention of becoming partisans either of the one opinion or of the other; but since our

---

* See Note by the Editors.

two contributors are at variance in regard to the support af-forded by a particular work to their respective sentiments, we have deemed it our duty to consult that work. If any one will take the trouble to read the whole chapter in Duchatelet's work, " De la Fécondité chez les Prostituées," concerning which these two gentlemen are at variance, and certain passages of which each somewhat hastily interprets in accordance with his own views, it will be found that the purpose of it is to show that prostitutes fail to add to the population, not because they do not conceive often, but because, after conception, abortions are frequent at all periods of gestation, and that, when carried to the period of viability, the infants almost uniformly die. So far Duchatelet's statement is favourable to Dr Campbell's object. But it is plain that the passage which Dr Campbell cites from Duchatelet does not comprise his final opinion on the subject of the proportion of deliveries in a given number of prostitutes, but only that which the evidence first considered should have led him to adopt, and that he goes on to extract from various additional documents a new conclusion,—not, as Dr Acton seems to state in the above reply, at the rate of $51\frac{1}{2}$ and $63\frac{1}{2}$ deliveries for every 1000 prostitutes, but at that rate annu-ally on the whole number of prostitutes in Paris; or his final conclu-sion is, that, taking the returns for 1832, there being from eight to ten annual deliveries not included in the above rate, there were in all 75 deliveries, or 21 in every 1000 of this part of the population. We here correct a material error in this chapter— 57 being put for 75—the only figure, it is plain, which, out of 3558, the estimated number of prostitutes in 1832, will give 21 in the 1000. The whole chapter, indeed, is perplexing. With the following quotation, which gives the substance of Duchatelet's views on this subject, we leave our two friends to debate the rest of the question, as they seem inclined to do, in an amicable manner. " Tout semble donc prouver que les prostituées sont plus aptes à la fécondation qu'on ne l'a cru jusqu'ici ; qu'il faut, pour cette fécondation ait lieu, une réunion de circonstances et, pour ainsi dire, le concours de la volonté et du laisser aller de la fille, véritable état intellectuel et moral étranger à l'exercise habituel de son métier ; que si les filles publiques amènent rarement leur grossesse au terme ordinaire, c'est qu'elles avortent presque tou-jours, soit que ces avortements aient lieu par des manœuvres crim-inelles, soit qu'il faille les attribuer à l'exercise de leur métier."*

---

* Parent Duchatelet, i. 241.

Case of Death by Poisoning with the Leaves of Aconite or Monks-hood, passed off in Jest for Parsley. By ALEX. RAMSAY, Surgeon, Broughty Ferry. Communicated by DR WEBSTER, Physician to the Royal Infirmary, Dundee.

ON Friday the 19th April 1844, I received a message to examine the body of ———— Hanton, aged fourteen years, who had died suddenly during the afternoon. On inquiry I ascertained that, on passing a garden in the parish of Murroes, about 11 A.M., he looked over the wall and asked a young man in the garden "if he would give him some parsley;" to which it was answered, that he would get some new parsley, which was much better than the old kind. The young man accordingly gave Hanton a handful of green leaves, of which he ate some. When Mrs Hanton returned to dinner from her field labour, she found her son complaining of burning sensation in the mouth, throat, and stomach, and very sick. About one o'clock his mother gave him a glass of whisky, thinking that this " cure for every ill" would relieve these symptoms. After getting the whisky he went to bed. His mother, thinking he would be well in a few minutes, left him alone in the house, and went to her work. Shortly after this, Hanton got up and went to a blacksmith's shop across the road, where he took a fit and fell on the ground. This at the time caused no alarm, as the boy smelt of whisky, and it was believed he was intoxicated. On his recovering he found his way back to the house ; and at six P.M., when his mother returned from her work, she found him lying across the bed, with his hands in his pockets, dead and stiffening. The floor of the room was wet with fluid, which he had apparently vomited. While in the house I was shown some of the leaves of the plant from which the boy had eaten, which seemed to be the aconitum neomontanum.* I gave no decided opinion as to the cause of death, but, in order to allay all surmisings and suppositions, recommended that the body should be opened for examination next day, to which the friends agreed; and I requested the kindness of Dr Webster of Dundee to assist me in the examination.

The following are the appearances on dissection twenty hours

---

* We have not yet been able to ascertain on what authority the plant was pronounced to be the *aconitum neomontanum*, which is a variety of the *aconitum commarum* of Linnæus.—EDITORS.

after death. Externally, the body was plump, and indicated the previous enjoyment of health; the countenance was pale, and sugillation had commenced posteriorly. On laying back the integuments over the cranium, there was slight ecchymosis over the occipital ridge, as if from a blow (which might have been caused by the fall in the smith's shop); and on removing the calvarium, the whole blood-vessels within the head were found enormously distended with dark-coloured fluid blood, upwards of a pound of which escaped from the skull and spinal canal. The brain was of natural consistence, but the ventricles contained a considerable quantity of serum. The lungs were healthy and not congested; the heart also was normal, but contained no blood. The stomach was completely empty, with a deep inflammatory blush over its whole internal surface, and here and there patches of a darker colour. We were not allowed to carry the dissection farther. None of the fluid ejected was preserved. Specimens of the plant were, prior to this time, to be found in every garden in the neighbourhood; but such was the anxiety to have it removed out of sight, that it would now be difficult to procure a plant for ornament or use.

It is impossible to ascertain the exact quantity of the leaves eaten in this case; but the probability is that, mistaken for parsley, it was considerable. His death appears to have been caused by the apoplectic state of the brain, probably ending in asphyxia. The administration of the whisky was most injudicious, and tended without doubt to accelerate the fatal event. Probably, had bleeding been resorted to early and freely, the result might have been different. Be this as it may, the case fully bears out the remarks of former writers as to the highly dangerous nature of the aconite. I am aware that at this moment it is exciting considerable attention as a remedial agent in rheumatic and neuralgic affections, and I doubt not, when judiciously administered, it may prove a useful and powerful remedy. But a drug of such power will require very great care in administration, and minute observation of its effects, before it can with safety be recommended to indiscriminate adoption in general practice. I may remark, that the plant itself could not well be mistaken for parsley; but that the deeply cut leaves, after being detached from the stem, might mislead the inexperienced. Moreover, it is some minutes after chewing it before its burning tendency manifests itself.

Part II.—REVIEWS.

A Practical and Theoretical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Skin; arranged according to a Natural System of Classification, and preceded by an Outline of the Anatomy and Physiology of the Skin. By Erasmus Wilson, Consulting Surgeon to the St Pancras Infirmary, London, &c. 8vo, pp. 440. London, 1842, Churchill.

It is remarked by Dr Latham, that one reason why surgery is more popular than medicine is its being easier; and he farther explains his meaning by showing that this comparative easiness depends on our ability to examine directly the diseases which it embraces. If this be true, of all the diseases which fall under the notice of the physician, those of the skin ought to be at once the easiest and the greatest favourites. There are none perhaps more easily recognised, none more frequently manifested, none more annoying to the patient, none which, if successfully treated, confer greater credit on the physician. And yet, are not too many of them the opprobria of medicine? Are they taught in general in our systematic courses? Are they watched, as they should be, by the students in our hospitals? Is the treatment of the vast majority of them founded on any thing better than empiricism? And yet these diseases have been studied; successful attempts have been made to systematize them; the classification of Willan is still held up as one of the most wonderful examples of method applied to medicine. We have our tables constructed, our classes, our orders, our genera, our species, with all their essential characters regularly and determinedly settled; can any thing be more beautiful or more useful? It may be heresy; but we cannot help thinking that this classification has done much to retard the progress of that branch of pathology. It has bound and fettered the advance of knowledge by conventional forms; it has supplied us with systems, instead of facts; it has abstracted, without generalizing; it has presented us with the form of knowledge, without the reality;

it has pretended simplicity, where it has created confusion. We are therefore prepared to welcome any work which proposes to break through these trammels, to destroy these unnatural distinctions, and to present us with a lucid arrangement, or, better still, with a lucid description without any arrangement, of the multifarious diseases to which the skin is subject. Mr Wilson proposes to himself the former of these tasks. Comparing the system of Willan to the Linnæan system of botany, he comes forward, the Jussieu of dermatology. In his own words—

" The thought occurred to me that the study of the diseases of the skin might be much simplified, and consequently facilitated, by the creation of a system which should embrace all the advantages offered by the natural system, while it retained the benefits derivable from the artificial system. It was this thought that gave origin to the system which I have endeavoured to illustrate in the following pages, and for which I have assumed the appellation of—Natural System of Diseases of the Skin." (Preface, p. 9.)

Our author seems to have imagined that he was the first to premise an accurate history of the organization of the skin to the study of its diseases, which, however, is not the case. The work of Lorry (Tractatus de Morbis Cutaneis, Parisiis, 1777) goes very minutely into the nature and structure of the skin, and these very necessary inquiries have imparted a spirit and a character to that work which raise it to a high place among treatises on this subject. To Mr Wilson, however, certainly belongs the merit of first resting a classification on the basis of anatomy and physiology, and if the study of these diseases is really to be promoted by such means, we must award to our author the title of a reformer; which, in many respects, he deserves as certainly as he has ambitiously claimed it for himself in his somewhat affected preface. We are not sure that the classification of Mr Wilson will find even the favour which it deserves. Scientific men are not now so eager to systematize as they were half a century ago; disliking also new names for old things, they will rather start at being told that ephelis is a " disorder of the chromatogenous function," and will perhaps underestimate the utility of calling a pustule a " suppurative inflammation of the dermis."* Some of our brethren also, who, to borrow an expression of Sir Astley Cooper's, " exhibit the snow

* The word " dermis " occurs repeatedly in this book. We wonder that a scholar like Mr Wilson should employ it; we have long known it as a sort of cockneyism of the London schools; but we thought it had been confined to the slang of the dissecting room. There is assuredly no such word in the technology of anatomical science.

on the tops of the mountains," will perhaps complain of the dogmatism with which Mr Wilson maintains certain opinions reckoned heretical, and may be inclined to demand proof for some of his assertions. For example, when he informs us that scabies is *invariably* produced by the itch-insect, it is not sufficient to add, " there is no part of the pathology of cutaneous diseases, of the truth of which I feel better satisfied, than of this;" and instead of censuring M. Gras for stopping short when facts ceased to support him, and, as Mr Wilson expresses it, " faltering when about to conclude the race," it would have been better had he himself exercised a similar caution. It is true he tells us, " I am thoroughly convinced, and so long as I possess that conviction shall ever continue to maintain, that acarus is the sole and only cause of scabies." This is all right; but we ought surely to have been told on what these decided convictions rest. We have no prepossession either way, and might possibly be convinced by the same reasoning which has made our author so decided, provided only it were furnished to us. But, after all, this dispute, like many others, is chiefly about words, for Mr W. goes on to say, that " every eruption, however acuminated and well defined its vesicles, if it be deficient of the living cause, is not scabies." (Preface, p. xvi.) This is of course just assuming what he was required to prove; for if Mr W. is determined to exclude from itch all those cases in which the acarus is absent, no matter how characteristic may be the eruption, it would be of course absurd to argue with him that the insect is not present in every case. But he ought certainly to have given us a name for those cases which we should be thus obliged to exclude. Another instance of the same positive assertion, " unsubstantiated by any proof," occurs in reference to the eruptive fevers, which our author believes " are diseases originating in the same morbid contagion, the differences between them depending on modification, either of the physical or of the vital conditions of the system by which the contagion is received." (Preface, p. 13.)

But we have really no wish to quarrel with a book presenting so many excellencies; and if Mr Wilson has failed to add any thing very novel to our knowledge of cutaneous diseases, he has the high merit of simplifying that knowledge, and of having collected into a very elegant volume the most valuable facts which the science presents.

The diseases are divided into four classes, according as they

affect the skin, the sudoriparous glands, the sebaceous glands, or the hairs and hair-follicles ; and the first chapter introduces us to the anatomy and physiology of these parts. In this chapter, Mr Wilson appears to advantage. He is evidently an accomplished and scientific anatomist, and the minute study of the tissues appears to have engaged much of his attention. In his description of the skin and epidermis, we do not find much that is novel. The mode of reproduction and growth of the latter is simply and briefly explained. The pigment of the skin, the sudoriparous and sebaceous glands, and the chemical composition of their secretions, are ably and succinctly described. In discussing the subject of perspiration, the author alludes to its importance in health, and cites the experiments of MM. Fourcault, Becquerel, and Breschet, of which he gives the following account :—

"The recent experiments of M. Fourcault* throw considerable light on the importance to health of the secreting function of the skin. The results of the observations made by this gentleman go to show, that if the cutaneous transpiration of an animal be wholly prevented by means of an impermeable covering, the animal will die in a short space of time, apparently in a state of asphyxia. Becquerel and Breschet, pursuing their experiments on animal temperature, conceived, that if they could prevent transpiration by the skin, they should induce internal fever ; the contrary, however, was the fact. After the application of a thick layer of varnish upon the skin of a rabbit, and adjusting their thermo-electric needles, they found the temperature of the deep muscles, in the course of half an hour, to be reduced from 38 to 32 ; in another half-hour, to 24.5 ; and in a third half-hour, it stood at only 3 degrees above the temperature of the atmosphere, 17 ; so that, in the course of an hour and a half, the temperature of the animal had fallen eighteen degrees, and the creature died." P. 19.

The second chapter is devoted to the consideration of those diseases to which the name of congestive inflammation of the dermis is given. These are divided into those with and those without specific constitutional symptoms. The former comprehend the eruptive fevers, the latter, erysipelas, urticaria, roseola, erythema. We shall not notice here the eruptive fevers, but at once pass on to those diseases which are really entitled to be regarded as affections of the skin. We are obliged to quarrel with Mr W., at the very outset of his excellent article on erysipelas, for a fault of the same character as that which we have already reprehended. In the *definition* of the disease, the fever is characterized as " contagious and infectious." We have no wish

---

* Examinateur Medicale, Oct. 1841.

to discuss this disputed question—few are inclined now, we believe, to agree with Mr Wilson—nor are we disposed to attach much importance to the experiment of Williams or the case of Costallat, but would only inquire, Is the infectious and contagious nature of the fever sufficiently established to make it the groundwork of a definition ?

The treatment of erysipelas is ably discussed. The mind of our author is of too philosophical a character to allow him to become the advocate of any exclusive system ; and, while he admits the applicability in certain cases of the stimulant plan of treatment, so confidently recommended by Williams for *all* cases, he does not deny the necessity of resorting to blood-letting when the state of the circulatory system warrants its employment. The indiscriminate advisers of antiphlogistic treatment would do well to consider the following excellent caution :—

> " Under all circumstances, it must be borne in mind that erysipelas is a disease of reduced powers, and, consequently, so soon as the artificial excitement produced by the fever shall have passed away, our efforts must be directed to the restoration of the tone of the system."

Mr Liston has drawn our attention to the fact, that the symptoms of increased vascular action may arise from constitutional irritation ; and thus, instead of being ameliorated, may be increased by venesection. With regard to local treatment, evaporating lotions, warm fomentations, or water-dressing—the temperature to be determined by the feelings of the patient—are recommended. We wish our author had placed some limitations on this treatment, for we cannot help concurring in the opinion of Mr Liston, that the " use of spirituous and evaporating lotions is fraught with the utmost danger ; for their direct tendency is to produce metastasis, and if that be to an internal organ of importance, the result is too generally fatal." The treatment, so fashionable at present, of mercurial inunction, is not alluded to ; and we think the experiments of Rayer fully justify its being discarded as a remedial means, though we are in the habit of keeping the affected part smeared with hog's lard, from the relief which its application appears to afford to the patient. Puncture is recommended where there is much congestion of the vessels of the skin, and incisions where there is deep-seated suppuration. This, we think, is dealing properly with the disputed question of puncture or incision. It has always appeared to us that these were resorted to for different objects ; the one,—puncture, serving to relieve vascular congestion, or even, from the

free intercommunication between the cells of the cellular membrane, to give escape to accumulations of fluid; the other, incision, being imperatively demanded wherever there are deep-seated accumulations of pus, or sloughing of the cellular tissue. The actual condition of the parts must in every case be our guide. We are glad to observe that Mr Wilson follows Mr Liston in recommending the extracts of aconite and belladonna in this affection. We have seen great abatement of the febrile symptoms, with manifest relief to the local uneasiness, follow their employment.

The remaining diseases in this class need not detain us long. We regret that Mr Wilson has not included in his description of erythema that singular epidemic variety of it which occurred in Paris in 1828, and to which the name of acrodinia was given. We were a little startled with one of the remedies recommended for the treatment of erythema,—the friction of the skin with croton-oil liniment. We have been accustomed to regard the pustular affections of the skin as usually more severe than the slighter exanthemata, and, to apply to the vocabulary of Mr Wilson, would be loath to engraft a suppurative upon a congestive inflammation of the dermis.

The fourth chapter of Mr Wilson's book is devoted to the consideration of those inflammations of the skin which are characterized by effusion of a serous fluid upon its surface, and embraces the orders Bullæ and Vesiculæ of Willan. This group is still further divided into sthenic and asthenic, the former embracing the bullous, the latter the vesicular diseases. We are not disposed to acquiesce altogether in this arrangement. The separation between bullous and vesicular diseases is certainly unnatural; and we also doubt very much whether we are warranted in regarding all the cases where blebs occur as asthenic. The disease—acute pemphigus for example—though rare, is certainly attended with fever of the sthenic type. Nor does it, like the other varieties of the same disease, usually occur in individuals of a broken-down constitution.

Our author properly follows Rayer in classing pemphigus and pompholyx together, and placing rupia beside them; from which natural position Willan had removed it, forcing it into the class of vesiculæ. He removes the miliary eruptions from the vesicular diseases, placing them under disorders of the sudoriparous system. Hydrargyria he considers identical with eczema, except in its cause; and scabies is placed in a class by itself, as a disease invariably produced by parasitic animalcules.

We do not think there is much of novelty in the remedies of Mr Wilson in these diseases. We are surprised with the slight notice which that severe and dangerous affection receives, to which the name of rupia escharotica or pemphigus gangraenosus has been given. It is true this disease seems indigenous to Ireland only ; and by far the best description which we have of it is by Dr Stokes, senior. (Dub. Med. and Phys. Essays, vol. i.) This paper, however, seems to have escaped the notice of Mr Wilson, as nothing is said by him of the scrofularia ointment, which Dr Stokes found so useful. Under the same head, we think, might be included the fatal sloughing of the pudendum described by Mr Kinder Wood of Manchester. In this chapter a foot-note informs us, that M. Gruby, whose researches we shall have occasion to speak of in connexion with favus, has discovered a plant in the bullae of rupia. We observe from a recent report of the French Academy of Sciences, that the same distinguished observer has found cryptogamous vegetations in the variety of herpes, termed " tonsurans " by M. Cazenave.

In reference to sudamina, Mr Wilson adopts the decided opinion of Bateman, that they invariably proceed from the effect of a stimulating regimen and a confined atmosphere. We suspect this is extreme, and should be inclined rather to coincide with the views of Professor Schoenlein, which he thus expresses in a lecture recently published :—

" I have also to observe, that the eruption of miliaria frequently takes place in spite of a cooling antiphlogistic treatment, as I have more than once seen at Würzburg, where it often appeared on the second day of the complaint, in spite of blood-letting. The physicians in Verona and Bergamo have made the same remark. The appearance of miliaria must therefore not be made an immediate subject of reproach to the physician, for, by inquiring at those places where miliaria has epidemically reigned with fatal effect, we find that the exanthema appears in spite of all medical care. If a physician finds no eruption of miliaria in the place where he practises, he should be thankful for it, and not forge weapons on that account against his colleagues. Nor can we be reproached with having violently suppressed the diarrhoea, and having thereby called forth the miliaria."—*Lancet, No.* 7.

In the fifth chapter of Mr Wilson's book, under the title " Suppurative Inflammation of the Dermis," are comprehended the pustular diseases, which are restricted to impetigo and ecthyma. Our author very properly follows the French school in abolishing the genus porrigo, and transfers variola to the eruptive fevers. Favus is regarded as a disease of the hair-

follicles, and sycosis as an inflammation of the sebaceous glands. There does not appear much that is novel in these chapters. In the treatment of that exceedingly troublesome affection "impetigo of the scalp," the absolute necessity of cleanliness is strongly enforced ; and the following incident, which, as the author says, " speaks volumes with regard to the treatment of this disease," is recounted :—

" I had often occasion to observe with regret the utter uselessness of all medicinal applications in the treatment of these cases in the St Pancras Infirmary, where numerous children are annually affected, and several are constantly in the sick wards. This want of success originated in the absence of proper nurses to carry out the directions of the surgeon. It was in vain that the necessity of cleanliness was urged upon them ; they received little for their labours, and were not disposed to engage in a most disagreeable duty on philanthropic grounds alone. Under such circumstances, the pharmacopœia was exhausted of its specifics, but no advantages resulted. Things were in this state, and I had little hope of change, when, to my surprise and delight, I perceived the number of patients suddenly diminish, and those who remained looked cheerful and better in health. I inquired into the cause of this change, when I learned that a new nurse had been appointed to the charge of the children, and that she had set her shoulder vigorously to the wheel of these obstinate eruptions, and had turned out several cures. Upon asking her how she proceeded, she of course looked mysterious, but I quieted her fears of my perquisitions, by telling her that it was not her secret that I sought, that my object was simply to approve of her proceeding, and to urge her to its continuance. She said in reply, that her treatment consisted in the application of a remedy derived from a ' subscription' given to her mother by Sir Astley Cooper ; that this legendary specific was a coarse admixture of ' butter and pepper.' For sound philosophy this remedy,* in its modus operandi, is worthy of the celebrated name with which the female Asclepiad had associated it, and I applauded its effects ; it was an apt illustration of the sympathetic treatment of wounds by anointing the weapon with salves, and swathing it in countless bandages. But I reserved for myself that which my female colabourer could not have comprehended—the perception of the benefit derivable from the thorough ablutions and rigid cleanliness with which the specific was accompanied." P. 187.

Chapter sixth, under the title of " Depositive Inflammation of the Dermis," discusses the order papulæ of Willan, which is strictly adhered to ; even Rayer's improvement of uniting strophulus and lichen is not adopted. Mr Wilson believes that pimples consist essentially in an effusion of plastic lymph into the tissue of one or more of the papillæ of the dermis. There is nothing in this chapter that need detain us.

In the treatment of the obstinate class of squamous diseases,

---

* " A humble imitation of the unguentum piperis nigri, of the Dublin Pharmacopœia, formerly recommended for favus."

R

to the consideration of which the following chapter is devoted, we find some valuable remarks. Since M. Biett directed attention to the employment of arsenic and tincture of cantharides in these affections, they have perhaps been too generally resorted to ; and it is well that those who use them indiscriminately should remember the caution of Rayer, which is quoted by Mr Wilson.

" ' It is undeniable that by means of these active medicines several of the varieties of psoriasis, even the most inveterate, have been cured ; but it is no less certain, that the majority of the cures thus accomplished have been but temporary, relapses having occurred the following spring or autumn ; that such relapses are more especially frequent among the labouring classes of the community ; and, lastly, that the greater number of cases of psoriasis inveterata treated by such means have been in nowise amended, although the medicines were continued for five or six months. I am therefore of opinion, that it is, in general, inexpedient to put patients affected with psoriasis inveterata upon an arsenical course, in the faint hope of deriving a mere temporary improvement, with the fear before our eyes of inducing some obstinate derangements of the digestive organs, or of permanently injuring the general constitution.' " P. 230.

Among the local applications recommended in these affections, we find three remedies which we have not before seen noticed by any British author. Anthrakokali is a chemical compound of potass and coal, and was introduced by Dr Polya of Pesth, who gave it internally. Gibert found it fail as an internal remedy, but succeed well externally as a mild stimulant application ; but he is inclined to prefer the fuligokali, a compound of soot and potass, prepared in imitation of anthrakokali by M. Deschamps. The following is Mr Wilson's account of the preparation of this remedy :—

" As an external application, in the form of ointment, it is resolutive, detersive, and stimulant. The mode of preparation of the compound is the following :—℞ Caustic potass, 20 parts ; soot, 100 parts ; water, q. s. Boil the mixture for an hour ; cool, filter, evaporate, and dry. The fuligokali is obtained in the form of scales or powder, and must be kept in well-stoppered bottles in a dry place. A sulphuretted fuligokali is obtained by the following process :—℞ Soot, 60 parts ; caustic potass, 14 parts ; sulphur, 4 parts. Heat the sulphur and potass with a little water, and after their solution, add the soot. Evaporate, dry, and close the resulting compound in well-stoppered bottles, and keep it in a dry place. The ointment used by M. Gibert is composed of a scruple to half a drachm of the salt to an ounce of lard. In larger proportion it is highly irritating." P. 396.

We are also informed that

" M. Lemery, of Saint Louis, has lately recalled the attention of practitioners to an old but valuable application in leprous affections—namely, tar. Finding, however, that this remedy was objectionable on account of

its colour and odour, he had recourse to one of the products of tar, *concrete naphthaline*, which afforded him the most successful results. The preparation which he employs is an ointment, composed of naphthaline, two to four parts : lard, thirty parts. This he applies to the diseased skin, on folds of linen, night and morning. The ointment is highly stimulating, and has a powerful smell, which quickly passes away. By means of the naphthaline ointment, M. Lemery succeeded in curing eight patients out of fourteen, in from five weeks to three months." P. 221.

We are surprised that an author so versant as Mr Wilson in medical literature, ancient as well as modern, should not have noticed, in connexion with the treatment of squamous diseases, a remedy introduced by Dr Burgess, with which we have succeeded in improving several very unpromising cases. The affected part is exposed to the vapour produced by throwing the following powder on a hot iron :—℞ Sulphuris, ℨiii. ; hyd. sulph. rub. ℈ii. ; iodinii, gr. x. The limb may be continued in the bath from fifteen to twenty minutes. In the course of a day or two the proportion of iodine may be increased (Burgess' Translation of Cazenave, p. 209).

In some obstinate cases we have found the following lotion of service :—℞ Creosoti, gtt.xx ; ac. hydrocyan. med. ℥i ; aq. fontis, ℥xii. : M. ft. lotio.

Chapter eighth discusses inflammation of the cutis, induced by parasitic animalcules inhabiting the epidermis, which comprehends scabies alone. We had intended to dispute with Mr Wilson the propriety of this exclusive view of this subject, but have already exceeded our limits so much that we must not attempt it. Those who believe the disease to be produced exclusively by the acarus, will be interested in the following experiments of M. Albin Gras, as to the poison which most readily destroyed it :—

" ' Immersed in pure water, the acarus was yet alive after three hours ; in saline water it moved feebly at the end of three hours ; in Goulard solution it lived after an hour ; in olive oil, almond oil, and castor oil, it survived more than two hours. In croton oil it was living after the lapse of an hour, but dead at the end of four ; in lime-water it was dead in three quarters of an hour ; in vinegar, in twenty minutes ; in alcohol, also in twenty minutes ; but in naphthaline still more quickly ; in a solution of sulphuret of potass, it was dead in twelve minutes ; in spirit of turpentine in nine minutes ; in a concentrated solution of hydriodate of potass, the acarus ceased to exist in from four to six minutes ; in a solution of arsenious acid it was dead in four minutes ; in sulphuric acid, diluted with three parts water, it died in three minutes ; in pure creosote, and in concentrated acids and alkalies, its death was immediate. Placed overnight on powdered sulphur, the animalcule was found dead the next day ; and it required to be

exposed to the vapour of burning sulphur for sixteen minutes before it died.'"
P. 247.

Chapter ninth is devoted to those diseases which consist essentially in hypertrophy of the papillæ of the cutis. We regret that our limits will not permit us to extract, as we had intended, our author's interesting observations on corns, which are well deserving the attention of the peripatetic sect of practitioners.

Chapter tenth, which includes nævus and purpura, has disappointed us. A disease so interesting as the latter ought surely to have claimed more attention from one who professes himself a reformer in diseases of the skin.

In chapter eleventh, Mr Wilson considers disordered sensibility of the dermis independent of local disease. Pruritus occupies the whole chapter.

Chapter twelfth is occupied with the consideration of the disorders of the chromatogenous functions of the dermis, the most important of which is albinismus. Under this head we are surprised to find it asserted that accidental albinismus is only met with in the natives of Africa. An interesting case is recorded by M. Alibert of its occurring in a lady, a native of France, who became affected at the age of 13.

In the thirteenth chapter, Mr W. considers the diseases of the sudoriparous glands, the most important of which is " sudatoria, an excited action of the sudoriparous glands attended with symptoms which indicate inflammatory determination." We doubt very much whether this disease has any better right to be regarded as a disease of the sudoriparous glands than diabetes.

The succeeding chapter is devoted to diseases of the sebaceous glands, under which is included molluscum contagiosum, the tumours of which Mr W. regards as " normal sebaceous cells, containing granular matter, filling them more or less completely." This opinion our readers will at once perceive is directly opposed to that of Dr Paterson of Leith (Ed. Med. and Surg. Journ., vol. lvi. p. 279), whose views Mr W. combats with some effect. He is scarcely so successful, however, in his attempt to establish the non-contagious character of the disease.

Chapter fifteenth embraces the diseases of the hair and hair-follicles; among which we find that plague of the nursery, favus. Mr Wilson gives the following account of the recent discoveries of the nature of the crusts of favus. The interest of these inquiries, and the importance attached to them, must be our apology for rather a long extract.

" *Pathology.*—The yellow substance which constitutes the crusts of favus has been satisfactorily proven, by recent investigation, to be an organic growth of simple structure, and bearing a marked resemblance to those inferior members of the vegetable kingdom, denominated *mould*. The structure of these crusts appears first to have attracted the attention of Remak, who had observed, so early as 1836, their composition of 'fungoid filaments.' Professor Schoenlein of Zurich next called them to notice in a paper in Müller's Archiv. for 1839, on the Pathology of the Impetigines, in which he makes no doubt of the fungous nature of the substance, and he illustrates his communication by a rude figure of the appearance which they presented in his observations. In pursuance of Schoenlein's researches, they were examined by Fuchs and Langenbeck of Gottingen; more recently they have been studied by Dr Gruby of Vienna, who expresses himself to have been ignorant of the labours of Schoenlein. Dr Gruby has, moreover, given a clear and lucid description of the growth, which he regards as a parasitic plant, and has determined it to belong to the genus mycodermis. The following is an abstract of a paper, from the pen of Dr Gruby, on this subject, in Müller's Archiv. for the present year :—

" ' The cup-shaped crust of favus is situated upon a depression of the dermis, and is covered by a sheath of epidermis, which is thickest on its concave, and thinnest on its convex surface. Immediately within the epidermis is a thin layer of amorphous substance, composed of minute molecules; this layer is dense, of a sulphur-yellow colour, and forms a capsule, which is in contact by its external surface with the epidermis, and by its internal surface with a fungous growth. The parasitic growth is attached by means of its roots to the yellow capsule, while its stem and branches extend inwards towards the centre of the capsule, and constitute the whitish gray and porous contents of the crust. The roots and branches of the mycoderm are smooth, cylindrical, transparent tubuli, which divide dichotomously from point to point. The interior of the tubuli is filled with a granular substance, and divided here and there by transverse septa. At the ends of the branches are situated the seeds of the plant, which are of a yellowish white colour, and either collected into an irregular assemblage, or disposed in the form of a garland. The diameter of the branches of the mycodermis is $\frac{1}{1000}$ to $\frac{1}{250}$ of a millimetre ; that of the molecules contained within the tubuli, $\frac{1}{10,000}$ to $\frac{1}{1000}$ mm. ; and that of the seeds, $\frac{1}{300}$ to $\frac{1}{100}$ mm. Dr Gruby has detected seeds in the follicles of the hair, and impacted in the ducts of the sebaceous glands.'

" To ascertain the degree of contagious power of the mycodermis, Dr Gruby inoculated various mammiferous animals, birds, reptiles, and insects, but unsuccessfully ; he was equally unsuccessful in his own person, but succeeded, after seventy-six attempts, in reproducing the mycodermis in a cryptogamic plant.

" Mr Busk, in a paper entitled ' Observations on Parasitical Growths on Living Animals,' in the Microscopic Journal (No. 10), has given an excellent figure of the mycodermis. He represents the branches as consisting of a series of oblong cells connected by their extremities." Pp. 348, 349.

In the disease mentagra or sycosis, M. Gruby, in September 1842, announced the discovery of similar cryptogamic formations, which constitute a vegetable sheath round the dermic portion of each hair. Mr Wilson, however, is more cautious

than some of our out-and-out " Histologists," in giving in to the theory of the vegetable character of these diseases; and very properly remarks, that, " however closely these fungous growths may resemble plants, their vegetable nature is very far from being established," and concludes with the following very scientific opinion of Dr Carpenter :—

" Dr Carpenter, in his Principles of Physiology (p. 453), speaking on the same subject, remarks—' It has been assumed that the organization is vegetable, because it (mycodermis) consists of a mass of cells capable of extending themselves by the ordinary process of multiplication. But it must be remembered that the vesicular organization is common to animals as well as to plants, being the only form that manifests itself at an early period of development in either kingdom, and remaining throughout life in those parts which have not undergone a metamorphosis for special purposes. Hence, to speak of *porrigo favosa*, or any similar disease, as produced by the growth of a vegetable within the animal body, appears to the author a very arbitrary assumption; the simple fact being, in regard to this and many other structures of a low type, that they present the simplest or most general kind of organization.' " P. 350.

In the treatment proposed for this obstinate affection there is nothing novel.

" *Treatment.*—The indications to be fulfilled in the treatment of favus are four in number—namely, 1. To destroy the vitality of the parasitic growth; 2. To remove all local causes of irritation; 3. To remove all general sources of irritation; 4. To excite the diseased hair-follicles to healthy action, and prevent the reproduction of the mycodermis." P. 351.

For fulfilling the first indication, the author recommends " impregnating the crusts and bathing the scalp with a moderately strong solution of bichloride of mercury;" and that which he recommends for the fourth is the tincture of iodine brushed into the scalp three times a-day. This remedy, first introduced by Dr Graves, has utterly failed in many cases in our hands; and we have not succeeded better with that so confidently recommended by Mr Wigan (Med. Gazette, Sept. 15, 1843), Beaufoy's concentrated pyroligneous acid. Mr Wilson alludes to the great success of the treatment of the brothers Mahon, and regrets that their remedies are still kept secret; but, if M. Duparc (on Cutaneous Diseases of Children) is to be credited, this is not the case, the following being their method of cure :—
" The hair is first cut short and then removed by emollient poultices. The head is now frequently washed with soap and water, and the inunctions and lotions continued until the scalp is completely cleaned. When this has been effected, the second stage of the treatment commences, the object of which is to

remove the hair *slowly* and *without pain* from all the points of the scalp occupied by the favus. Every second day the ointment (No. 1.) is applied, and its use continued according to the obstinacy of the case. On the intervening days the hair is combed with a fine comb to remove the loose hairs. This mode of treatment having been continued for about a fortnight, a depilatory powder (No. 2.) is sprinkled through the hair once a-week; and on the following day the hair is combed, and the depilatory ointment applied as before. At the end of a month or six weeks, a more active ointment is employed every day; and, as the disease gives way, the frictions are made only once a-week, until the redness of the skin has entirely disappeared."

Although the formulæ of the remedies employed by the "*freres Mahon*" have been kept secret, yet their composition has been very nearly ascertained by experiment, and is supposed to be as follows :—No. 1. Slaked lime, 8 scruples; soda of commerce, 12 scruples; lard, 64 scruples.—No. 2. Wood ashes, 64 parts; pulverized charcoal, 32 parts.—*Lotion.* Lime-water, 500 parts; sulphate of soda, 185 parts; alcohol, 24 parts; white soap, 10 parts.

We are much inclined to recommend the removal of the hair by some depilatory ointment and assiduous combing, accompanied with frequent washing, in the early stage of the disease. When the more acute symptoms have subsided, the affected parts should be touched every third day with pure creosote, and covered in the interval with pledgets smeared with an ointment composed of creosote, gtt.xxx.; lard, ʒi.; or dipped in the liniment recommended for scaly diseases.

Of the two remaining chapters of Mr Wilson's book, the one is devoted to syphilitic eruptions, which we have no room at present to discuss; and the other might with more propriety have been styled an appendix, consisting chiefly of additional observations on subjects treated of in preceding chapters.

From the full account that we have given of this work, and the numerous extracts with which that is interspersed, our readers will be able to form for themselves an estimate of its merits. As far as the fulfilment of the object for which it professes to have been written is concerned, we cannot but regard it as a failure, the changes proposed in the classification consisting chiefly in the nomenclature of the orders and genera. Nor can we consider such an object worthy either of the talents or the opportunities of observation which Mr Wilson undoubtedly

possesses.   The earnest mind, investigating the pathology of this interesting class of diseases, will not now be put off by the forms and semblances of knowledge.   We require a real grappling with the subject in all its extent.   For this task, even in the work before us, Mr Wilson shows himself qualified.   Let him take the step in advance, and we anticipate a glorious result, the sign of which will probably be the exploding of his own and all other existing systems, and the establishment of a new one on a more extended and firmer basis.   Meanwhile, let us congratulate Mr Wilson on what we must regard merely as a first instalment, the numerous excellencies of which will require him to exert himself on future occasions, if he is to fulfil the expectations which his first volume on this subject has raised.

A Practical Treatise on the Diseases of the Testes and of the Spermatic Cord and Scrotum.   By T. B. Curling, Lecturer on Surgery, and Assistant Surgeon to the London Hospital, Surgeon to the Jews' Hospital, &c.

The work heading this article is one of much merit, and is written in a very plain, clear, and unpretending style.   The author's object seems to have been, through every page of the work, as he himself states it was, to endeavour to make it as practical and as useful as possible.   This point he has most certainly fulfilled.   He has, however, done more.   He has endeavoured to explain, as far as the present state of our knowledge would permit, the processes by which and the circumstances under which the different diseases connected with the several tissues which compose the organ under his consideration are produced and developed.   In the treatment of these subjects he has not forgotten, but on the contrary he has brought somewhat prominently forward, the effect which the character of the constitution has upon the nature of these diseases, and upon their onward progress.   It is here that the surgeon, who is desirous of advancing this branch of medicine to a higher state of perfection than it at present possesses, must labour.   It is not by statistics, though this has done much ;—it is not by a mere knowledge of descriptive and relative anatomy ;—it is not by the minute description of symptoms ;—nor is it by the advancing of morbid anatomy in the direction in which it has, up to this time, almost

entirely progressed, that surgery is to be really improved. It is by studying disease in an entirely different method, but still in connexion with these ; by endeavouring to unravel, analyze, and make known the nature of disease. To do this, the origin and progress of disease must be studied at once chemically, microscopically, and physiologically. We indeed grant that our present state of knowledge, in any of these branches, with the exception of the last, prevents them from being brought, with any chance of success, except in a few rare instances, to our aid. Nevertheless, it is not of small importance to be acquainted with the correct path along which observers ought to proceed ; for then time, continued labour, unwearied industry, and indomitable perseverance, are but wanting to carry our undertaking to a successful issue.

The subjects described or spoken of in the work at present under our consideration are divided by the author into two great and distinct classes :—into that which relates to the healthy structure and the healthy functions of the testes, their coverings, their ducts, and their vessels ; and into that in which the diseases of these parts are described, and their treatment laid down.

The remarks which we propose making on the first portion of the work, i. e. upon the part which relates to the healthy anatomy and the healthy functions, shall be confined principally to a description of the process by means of which the testicle passes from the abdomen into the scrotum ; as on this point Mr Curling has indeed thrown great light, for which he deserves no small credit.

That it was long known, previous to the time of Haller, that the testes, during the greater part of fœtal life, are situated in the abdomen, is evident from the writings of several of the older anatomists : this fact is also shown by Haller himself, as in his Opuscula Pathologica he refers to the circumstance of the older anatomists having noticed the abdominal position of the testicles during fœtal life. However, neither they nor Haller were acquainted with the circumstances on which the change of situation of the testicles, in the two stages of life, depends. And what is very curious and well worthy of remark, is, that although John Hunter described, to a certain extent with correctness, the gubernaculum testis,—a part which he had himself discovered,—still he did not assign to it its proper use, and from this circumstance was unable to account, with any degree of

s

certainty, for the descent of the testicle. It was not until Mr Curling had published his exceedingly beautiful and highly scientific remarks upon the subject, that we possessed in this country any correct knowledge as to the cause of the descent of this organ.

We propose here to enter at some length into one or two of the anatomical questions connected with the descent of the testicle. This we are induced to do, not only by feeling the high importance of a right understanding of the anatomy of the descent in a surgical point of view, but also because we have observed that the accounts of this subject in our best works of anatomy, are either founded on misapprehension, or so obscurely expressed, that it is impossible for the reader to discover the true nature of the descent, particularly in its relations to the peritoneum.

In Hunter's Animal Economy is contained a paper upon the descent of the testicle, which is distinguished as exhibiting great truth of description, and a rare power of generalizing anatomical facts.

The cremaster muscle (we follow Hunter's account, retaining as far as we can with brevity his own words), has two very different positions in the foetus and in the adult; in the former, it *ascends* to the testicle, while in the latter, it *descends* into the scrotum to the same organ.* This muscle appears to be composed of the lower fibres of the obliquus internus and transversalis muscles. The testicles, while in the abdomen, we have found to be connected with the scrotum by means of a structure which passes from the lower border of the testis to it; to this structure we shall give the name of ligament or gubernaculum testis. This ligament lies before the psoas muscle, but behind the peritoneum, while within the abdomen, and reaches from the testis to the groin; thence it passes directly downwards into the scrotum, in the same manner as the spermatic vessels do in the adult, and is there lost. It is hard to say what is the structure or composition of this ligament; it is certainly vascular and fibrous, and the fibres run in the direction of the ligament, which is covered by the fibres of the musculus testis, which are placed immediately behind the peritoneum. The testes move down-

---

* For the sake of clearness and distinctness, we shall call the cremaster muscle, while it ascends within the abdomen to the testicle, musculus testis ; and we shall call it cremaster muscle when passing from the walls of the abdomen to the testicle, after that organ is situated in the scrotum ; premising at the same time that we believe them to be, though differently situated, the *same* muscle.

wards until their extremity comes into contact with the lower part of the abdominal parietes. That portion of the gubernaculum testis which was within the abdomen lies now in the passage from the abdomen to the scrotum, into which the testes are afterwards to be received. As the testicle passes out from the abdomen, it in some degree inverts the gubernaculum testis; the external surface now becoming the internal, and the internal the external; so that the peritoneum, instead of covering the cremaster muscle, is covered by it, and thus forms the tunica vaginalis.

After the testis has got quite through the tendon of the external oblique muscle, it easily acquires its determined station, though it commonly remains for some time by the side of the penis,* and only by degrees descends to the bottom of the scrotum. When the testis has entirely descended into the scrotum, its ligament is still connected with the scrotum, and lies under it, but is shortened and compressed.

In the hedgehog, the testes continue through life to be lodged within the abdomen, as in the human fœtus; and are there fastened by a similar ligament near to the groin. In that animal, the lowermost fibres of the internal oblique muscle, which constitute the cremaster, mount up on the ligament to the lower end of the testis. Sometimes in the human body, and very often in sheep, the testes do not descend until late in life, or never at all. In the ram, when the testes have descended, the cremaster is a very strong muscle, and covers the tunica vaginalis; but in the ram whose testes remain in the abdominal cavity, " I find that the cremaster still exists," though it is a weaker muscle, and instead of passing downwards, it passes upwards, and is lost near to the testis. In the human fœtus, while the testes are in the cavity of the abdomen, the cremaster is so slender that " I cannot trace it to my own satisfaction," either turning up towards the testis or turning down towards the scrotum. Yet, from analogy, we may conclude that it passes up to the testicle; since in the adult we find it inserted or lost on the lower part of the tunica vaginalis, in the same manner as in the adult quadruped.

What is the immediate cause of the descent of the testicles? It cannot be the compressive force of respiration, the testes being in the scrotum before the child has breathed.

---

* Professor Owen states, that this is the permanent situation of the testes in the quadrumana, in which also, as in the human fœtus, at the period above mentioned, the tunica vaginalis communicates with the abdominal cavity.

Is the testicle pulled down by the musculus testis? " I can hardly suppose it, because, if this were the case, I see no reason why it should not take place in the hedgehog as well as in other quadrupeds."*   But even if the musculus testis had this power, it could not bring it lower than the external abdominal ring.†   We have here given a pretty full digest of John Hunter's paper on the descent of the testicle.   We shall immediately show that these observations correspond almost entirely with those lately made by Mr Curling.

We first, however, say a few words concerning the opinions held as to the manner in which the cremaster muscle is formed.   These may be divided into two orders :—

First, On the philosophical and comprehensive idea, that the cremaster muscle is formed in the same way in the human being as in the mammalia ; *i. e.* this muscle is formed at a certain period, previous to its being required ; and this formation takes place independently of any accidental circumstance.

Secondly, On the very limited and very unphilosophical notion, that this muscle is formed accidentally, by the testicle carrying along with it, while passing through the walls of the abdomen into the scrotum, a few of the fibres of the internal oblique and transversalis muscles.

The first opinion was, as far as we know, first stated by John Hunter, and subsequently adopted by Sir Astley Cooper, who says, " The cremaster, as far as I can distinguish it in the fœtus, passes upon the gubernaculum to the testis."

The other notion is that held by Carus, Jules Cloquet, and indeed generally by anatomists.   Jules Cloquet says, in speaking of this subject, " The cremaster does not exist before the period at which the descent of the testicle takes place ; it is formed in proportion as this organ, which is drawn down by the gubernaculum, passes from the abdomen into the scrotum."   He again says, " By drawing down the gubernaculum, we simulate, in some degree, the natural descent of the testicle, and form an artificial cremaster."   There is a reach of thought in the former

---

* Here we have a good illustration of the danger under which we lie of either falling into error, or of allowing truth to escape us, when drawing conclusions from apparently similar data, in consequence of the requisite knowledge not having been obtained.   This was principally the cause why John Hunter did not discover the use of the gubernaculum.

† We shall immediately point out that John Hunter erred in making this statement.

view which contrasts well with the narrow and crude explanation of the latter.

Having now shortly stated the opinions held as to the mode by which the cremaster muscle is formed, we shall proceed to give a pretty full analysis of Mr Curling's views of the anatomical composition of the gubernaculum testis, its insertions, and its uses.*

The gubernaculum testis Mr Curling describes as a soft, solid, projecting body, which is connected above with the inferior extremity of the testicle, the lower end of the epididymis, and the commencement of the vas deferens. The central part, which forms the bulk of the gubernaculum, is composed of a soft, transparent, distensible, gelatinous tissue—primitive cellular tissue. This central mass is surrounded by a layer of well-developed muscular fibres, which present under the microscope the striated appearance peculiar to animal muscular fibre. These muscular fibres, which may be traced from the ring to the testis, are surrounded by a layer of the same tissue as that which composes the central mass. We have the peritoneum, except at the posterior part, investing all these structures. On laying open the inguinal canal, the gubernaculum is, on careful dissection, seen to terminate in three processes, each of which has a distinct attachment. These attachments are as follows : the external and broadest portion is connected to Poupart's ligament, in the inguinal canal ; the middle forms a lengthened band, which escapes from the external abdominal ring, and descends to the bottom of the scrotum, where it joins the dartos; the internal process passes directly inwards, and is attached to the os pubis, and to the sheath of the rectus muscle. These attachments, Mr Curling says, he " has succeeded in tracing out, before the testicle has descended, at different stages of the process, and immediately after its completion, when the fibres have assumed the situation of the cremaster muscle," of the identity of which with the cremaster, he says, no " doubt can continue to be entertained."

When we compare this description with John Hunter's, we learn how near that fine observer came to the truth. When the facts were not sufficient, with what a power of generalizing did he bring to his aid the facts observed by him in comparative anatomy ! The microscope was little used in his day, and was not used at all by him; he could not therefore prove

---

* These views are also contained in a paper by Mr Curling, in the Medical Gazette, April 1841, " On the Structure of the Gubernaculum, and on the Descent of the Testis in the Fœtus."

from direct observation the correctness of his belief of the existence of the musculus testis, and that it subsequently becomes the cremaster muscle. He, however, observed that in the inferior mammalia the musculus testis did become the cremaster, and thence he concluded from analogy what Mr Curling has proved by direct observation.

Here we cannot refrain from saying a few words upon the doubt which has lately been thrown upon the existence of muscular fibres in the gubernaculum. This doubt arises from a scepticism of the capability of the microscope to enable us to distinguish definitely muscular fibre from other tissues. This scepticism is not at all warranted. We most readily grant, and it would be beneficial if it were more generally allowed, that in the present state of our microscopic knowledge, we are unable to distinguish many tissues from others which have very different properties, but in this catalogue muscular tissue cannot be placed. This organic element has distinct and peculiar microscopic properties, which prevent it from being mistaken for any other animal tissue. It was mentioned above, that Mr Hunter observed the persistence of the gubernaculum in the scrotum in the adult. In this statement he is supported by Mr Curling, who states, " that the middle attachment of the gubernaculum, which may be traced to the dartos at the bottom of the scrotum, gradually wastes away, and soon becomes indistinct; slight traces, however, of this attachment often remain until the latest period of life. After death, in dragging the testicle of an adult out of the scrotum by pulling the cord, the lower part of the gland, which is uncovered by serous membrane, is often found connected to the bottom of the scrotum by a band of firm and dense cellular tissue, which requires division with a scalpel in order to complete the separation. I believe this band to be the remains of the middle attachment of the gubernaculum."

We shall now finish our analysis and remarks on the first part of Mr Curling's work by explaining his view of the process by which the testicle is made to descend into the scrotum. This process takes place in the same way in the human fœtus as in some of the rodentia. Previous to the commencement of the season of sexual excitement, the testicles in these animals, as for example in the mole, are situated in the abdomen. These glands are subject to remarkable periodical enlargement during the season of copulation, when they are drawn downwards by the musculus testis to the external rings, where they are, by the ex-

pulsive actions of the diaphragm and abdominal muscles, protruded without the abdomen, and are contained within the cremasteric pouches which have been formed by means of the inversion of the gubernaculum and musculus testis. In other words, the peritoneum, which formed the external surface of the gubernaculum, now forms the internal surface of the cremasteric sac, and in this way we have the tunica vaginalis produced. As the testicles diminish in size, which they do after the season of sexual desire, their muscular coverings contract, and they are carried up to their former situation in the abdomen, the peritoneum becoming again external, and each recently formed cremasteric muscle again the musculus testis. A process exactly similar to this takes place during the descent of the human testicle. The musculus testis contracts and pulls the testicles downwards, first to a level with the external and internal insertions of the muscles; they are then pulled gradually into the scrotum, by means of a process of contraction which is taking place in the middle insertion. By means of this process the portion of the gubernaculum testis which has descended below its *external* and *internal* insertions becomes necessarily inverted, *i. e.* the peritoneum which covered the musculus testis now becomes internal to that structure, while that structure has taken the relative position of the cremaster muscle. We have thus formed the tunica vaginalis and the cremaster muscle. This explanation of the manner in which the cremaster muscle is produced is at one with that held by John Hunter.

We have seen that John Hunter was unable to account for the descent of the testicle. " It is difficult," as Mr Curling well remarks, " to understand why, after arriving at the former conviction, chiefly from analogy, he was not induced by the same process of reasoning to conclude, that a muscle capable of drawing down the testicle in animals would be adequate to accomplish the same purpose in the foetus." He, however, did all but this.

We conclude our remarks for the present on this subject in the following words of Mr Curling :—

"I see no reason to doubt that the cremaster discharges the same office in the human embryo, as that which it undoubtedly performs in certain animals at a particular season. The fibres proceeding from Poupart's ligament and the obliquus internus tend to guide the gland into the inguinal canal, those attached to the os pubis to draw it below the abdominal ring, and the process descending to the scrotum to direct it to its final destination. As the descent approaches completion, the muscular fibres which perform so important a part in it gradually become everted, assume new relations,

invest the gland, and, instead of drawing down the testicle, acquire the new functions of elevating, supporting, and compressing it."
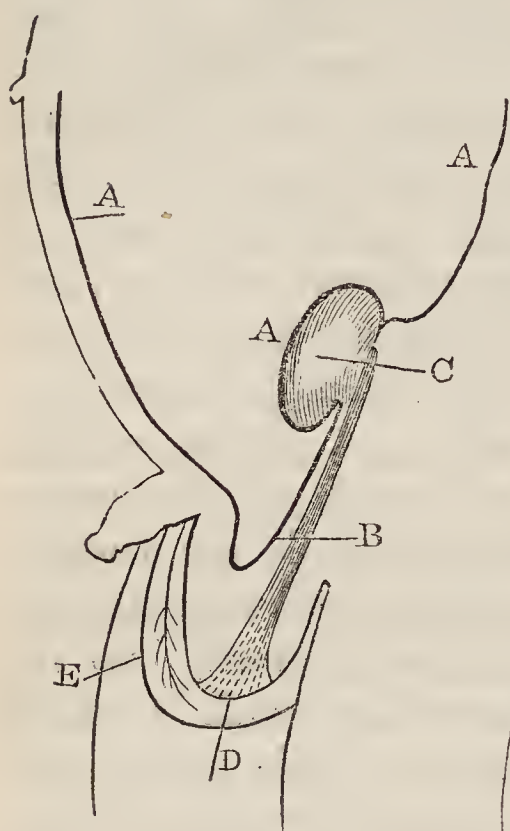
Fig. 1.   Fig. 2.
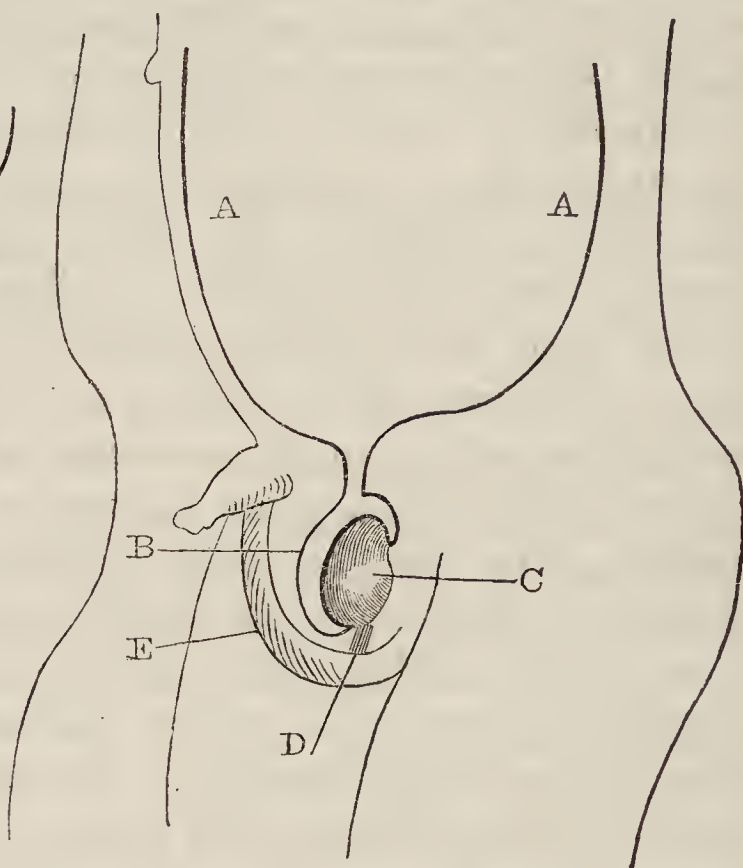
Fig. 1.

A Peritoneum—B Nipple-shaped prolongation of do.—C Testicle lying behind Peritoneum in Abdomen—D Middle insertion of Gubernaculum testis—E Scrotum.

Fig. 2.

A Peritoneum—B Peritoneum prolonged into Scrotum, forming the tunica vaginalis—C Testicle in Scrotum lying behind do.—D remains of middle insertion of Gubernaculum—E Scrotum.

The descriptions given regarding the descent of the testicle into the scrotum, by almost all those who have written on the subject, are such in our opinion as to convey the idea that the testicle, in its descent, acquires three serous coverings,—the one which it had while within the abdomen, the other two on its descent into the scrotum. " In this descent," says Mr Morton, for example, " they bring along with them the same partial covering from the peritoneum which they had when situated just below the kidneys, which, with the production from the peritoneum, already formed in the scrotum for their reception, constitutes the tunica vaginalis testis."* We do not hesitate to state, and that from our own personal observations, that *no* sac is prolonged into the scrotum, *previous* to the descent of the testicle ; but that this

* Surgical Anatomy of Inguinal Herniæ, the Testes and its Coverings, by Thomas Morton, 1841, p. 280.

organ coming down from the abdomen, brings a portion of the peritoneum with it, and in this way the tunica vaginalis is produced. While the testicle is still within the abdomen, a small nipple-like projection of the peritoneum, in the direction of the canal, is all that as yet represents the tunica vaginalis, subsequently formed in the scrotum. The testicle, always intimately connected to the peritoneum, gradually descends, losing its attachment to the part above, and acquiring a new attachment to the part below, until it comes to the level of the little projecting pouch, behind which it passes, and carries it down with it to the scrotum.

From the space occupied in this review by our remarks upon Mr Curling's description of the descent of the testicle from the abdomen into the scrotum, we shall be unable to enter at any great length into a consideration of the second or principal part of the work. We shall, we fear, be obliged to give but a very general analysis of it.

The first chapter of this part of Mr Curling's work considers and illustrates several interesting cases of congenital malformations and imperfections of the testicles. This chapter deserves no small praise. It is at once interesting, curious, and highly practical.

Man's frame is a complex machine, being composed of several organs, each of which has its own peculiar office to fulfil, and they are all so dependent on each other, that the irregular action of one soon perverts or destroys entirely the healthy actions of the rest. Besides this, there is between some organs a much closer connexion than between others. Such a connexion has been proved by observation to exist between some part of the nervous centre and the genital organs. Of the nature of this connexion, however, we know nothing. Hippocrates says of the Scythians, that when they were sick, they opened a vein behind each ear; when the blood had flowed from them, they felt themselves overcome by feebleness, and went to sleep. On waking, some found themselves cured; but this was not the case with all of them. " For my own part, I consider that this method of cure was very hurtful to them; because, behind the ears there are veins, the section of which produces impotency." Baron Larrey states, that he has found this remark of Hippocrates confirmed by the Egyptians. We have also contained in the works of many authors cases which seem distinctly to prove that a close connexion of some kind exists between the encephalon and the

T

functions of the testes. We shall quote the following case from Mr Curling's work, in illustration of this point :—

" A few years ago, a man who had met with an injury of this description, which had been followed by wasting of the testes, and the development of tumours on each side of the chest, resembling mammæ, presented himself at the different hospitals in London. I saw him in March 1828, at the London Hospital, when he had the appearance of a man who had seen hard service. He stated that he was about fifty-nine years of age, a married man, and the father of several children. He had belonged to the legion in the Queen of Spain's service. About two years and a half previously, in an attempt to jump over a trench in a retreat, he fell backwards, and injured the posterior part of his head. Whilst on the ground he received a bayonet wound on the left side, and a sabre cut on the forehead of the same side. He recovered from these injuries, and returned to England. Since the accident he had completely lost his virility. He had no desire for sexual connexion ; his penis had dwindled in size ; his right testis had gradually wasted, and was no larger than a horse-bean, and the left gland was also a good deal diminished in bulk. The skull, at the occiput, seemed somewhat flattened."

Mr Curling has the following remarks upon this and other cases of a similar kind which he has quoted :—" We cannot doubt that in these cases the loss of sexual desire, and the wasting of the testes, were the direct results of the injury of the brain ; and they go far to prove the essential dependence of the functions of these glands upon the cerebral organ."

The inflammatory and organic diseases of the testes which are treated of here, are spoken of in the following order :—First, the diseases of the protective parts or tunics, i. e. the tunica vaginalis and tunica albugenia ; then the diseases of the glandular or secreting structures ; and, lastly, those of the excretory parts.

We shall conclude our somewhat general remarks on this portion of the work under consideration, by the following excellent and practical observations :—

" A careful examination into the merits of the various modes of effecting a radical cure of hydrocele fully establishes the superiority of the treatment by injection. The great error formerly committed by surgeons in endeavouring to excite a high degree of inflammation, arose from a mistaken view of the object to be attained ; for not perceiving that the exudant secretion could be corrected by altering the action of the vessels of the part, they thought it necessary to obtain the obliteration of the natural cavity, which, moreover, they endeavoured to' effect by producing suppurative inflammation of the membrane, instead of by the milder process of adhesion. Injection has now been largely tried in this and other countries, and experience warrants in asserting that, though it is not infallible, of all the plans hitherto practised, it combines the greatest number of advantages. The pain attending it is slight, its effects are mild, and at the same time tolerably sure ; if properly performed, it is free from danger ; and it frequently succeeds without altering the natural condition of the parts."

Part III.—Periscope.

ANATOMY AND PHYSIOLOGY.

On the Structure, Relations, and Functions of the Nervous System.

[Continued from our last.]

"*Functions of the Brain and Nervous Cord.*—Although I have now pointed out the existence of fibres in the nervous cord of myriapoda and arachnida, which lead us to the conclusion that the doctrine of the individuality or special function of each fibre is correct ; that there are fibres in every nerve derived from two distinct portions of the cord, which, from their direct communication with the brain, from one end of the body to the other, are believed to minister to volition and to sensation, and that other fibres also exist in the same nerves, that have no communication whatever with that organ ; and further, that some of these which are extended transversely across the body, influence both sides of those individual segments to which they are distributed, and those only, while others combine in action two or more contiguous segments, but only by direct influence on one side of the body ;—it yet remains to be shown by experiment, whether the assignment of certain functions to these parts of the nervous system, in these inferior animals, is correct ;—whether the results of experiments on these worm-like beings agree in principle with the experiments already made by many physiologists on the vertebrated classes, and with those which the pathology of disease has afforded in man himself ;—whether, as leading to these important results, they coincide with the first experiment made on one of the crustacea, conjointly by Dr Marshall Hall and myself, in the spring of 1834, and with others subsequently performed by Valentin on the same animal, and afterwards repeated by Dr Baly and myself in 1840 ; and, lastly, whether the seat of sensation and volition is confined entirely to the supra-œsophageal ganglia, the brain in these articulata."

"The questions that require to be examined are—

1*st*, Whether sensation and volition are confined to the supra-œsophageal ganglia, the brain, or whether they exist also in the first subœsophageal ganglion, or in the other ganglia of the cord ?

2*d*, Whether these functions are destroyed by destruction of the brain ?

3*d*, Whether there is any direct evidence of sensation in a portion of the cord that is insulated from the brain ?

4*th*, Whether the movements in these animals, when deprived of the brain, are identical with those of the crustacea and vertebrata ?"

"*Experiment 1.*—The front of the head, antennæ, eyes, and brain, were at once removed with a pair of scissors from an active adult specimen. While held between my fingers there were powerful contortions of the whole body of the animal, and when placed on a table, it moved rapidly forwards as in the usual mode of locomotion, and continued to do so for a few minutes ; but the motions gradually became slower and slower, and at last were so feeble that onward progression was suspended, although the

legs were still feebly moved, as in walking, for nearly half an hour, when their motions entirely ceased. There was no evidence whatever of sensation or volition, although the suboesophageal ganglion and cord were uninjured. During locomotion the body moved in a direct line and always forwards. When it met with a slight obstacle it climbed over it, or when too high to pass over, the body stood directly opposite it with the mutilated portion of the head in contact with the obstacle, and the locomotive actions of the limbs gradually increased, apparently by the excitement of contact with a foreign body against the lacerated surface of the head."

" When the movements of the limbs ceased, the body was maintained in its natural position upon them for several hours, until fresh mechanical excitement was applied to it, when the locomotive actions were repeated."

" *Experiment* 2.—The head was removed from the body in the *third* segment, the second of the trunk, and acts of locomotion were performed by the body precisely as in the last instance, and were always re-excited in the same manner. When turned on its back the body was instantly excited to violent contortions until it had regained its proper position, and stood supported on the legs, which were extended, and slowly moved as in locomotion, after it had continued to walk for four minutes. When the anterior cut extremity of the cord was irritated with a needle, locomotion forwards was again induced. Pressure on the anterior segment excited it most readily. Motions of the legs were instantly excited by simple contact with any foreign body, and those on both sides, anterior and posterior, were moved, but insufficiently for locomotion. Violent contortions were always induced when the body was placed on its back, until its proper position was regained ; but the motions of the legs were not excited by a current of air directed on them from a blow-pipe until after the lapse of a few seconds ; but there was always a slight convulsive motion of the body after each *sudden* current. The legs were less excited, during the first few hours after decapitation, by pressure on the posterior than on the anterior segments."

" *Experiment* 3.—The body was divided in the *seventh* segment while the animal was running briskly. It continued to move forward for a few minutes, but the motions gradually became slower and slower, as in the preceding experiments. They were actively *re-excited* by a brisk shake of the table, but soon became quiet, with slow but very gradual motions of the legs. Progression was always quickly reinduced by pressure on the anterior segments, and this was more active than when applied to the posterior. It was always reinduced when the cut extremity of the cord was irritated slightly with the point of a needle. At the expiration of an hour from the making of these experiments, the atmosphere continuing at about the same temperature (56° Fahr.), the excised heads of Nos. 2 and 3 were still living, and exhibited acts of volition, and that of the latter, with the segments and legs attached to it, made attempts to walk. Both of these moved the antennæ briskly, and touched objects that were near to them, as if to *feel* and appreciate."

" *Experiment* 4.—The body was divided at the *fourteenth* segment while running. The anterior part exhibited all the voluntary actions of the perfect animal, those of touching, avoiding, or seeking an object, and also of locomotion, but its movements were slow and were made with difficulty. This arose from want of proper counterpoise of the body, since when that was supplied by the proximity of the individual to the upright surface of any object, locomotion was well performed. The remaining portion of the body was then divided into two parts ; both of which were instantly excited to

movements of the legs when irritated, but without any power of locomotion, or ability of either part to support itself in its proper position. The motions of the legs were readily induced by a current of air, or when the segments were compressed, or the cut end of the cord touched with the point of a needle. At the expiration of *nine* hours the anterior division of the body with the head was dead, and not the slightest voluntary or reflex action could be excited in it by any means. But the middle division of the same individual was readily excited to reflex actions of the legs and contractions of the segments, by compression of the segments, by irritation of the cord with a needle, and by brisk currents of air from a blow-pipe. These reflected actions were much stronger in the third or posterior division of the segments, and were all induced by similar means. After *twelve* hours they were feebler in the middle division of the segments, but were even more readily excited in the posterior. After *eighteen* hours they were scarcely perceptible in the middle division on the application of the needle, and not at all on compression ; but they were still easily induced in the posterior, and continued to be so in the four or five posterior pair of legs even at the expiration of *twenty-four* hours. The temperature during the interval was not higher than 64° Fahr."

(*To be continued.*)

Experiments by M. Chatin on the Mode by which Poisons are Absorbed.

I f no one doubts that the absorption of the nutritive elements is effected by means of the chyliferous vessels, two opinions are however held as to how poisons are absorbed from without into the system. According to one of these opinions, it is believed that the chyliferous vessels absorb indifferently all fluid substances contained in the digestive cavities. On the other hand, the experiments of several physiologists, and especially those of Magendie, support the other notion, viz. that the absorption of poisons is effected only through the venous system. M. Chatin has made a series of experiments for the purpose of proving the correctness of one or other of these opinions. After having poisoned a dog with arsenious acid, he obtained arsenic from the blood taken from the heart and the large vessel, while the chyle removed from the thoracic duct did not furnish the slightest trace of that poison. The same experiment repeated with tartar emetic led to the same results. From these facts, with others of a similar kind, M. Chatin is led to believe that poisonous substances are never absorbed by the chyliferous vessels.—*Séances de l'Académie Royale des Sciences, Archives Générales de la Médecine,* Avril 1844.

SURGERY.

On the General Laws of Displacement of Bones in Fracture.

I n the *Annales de la Chirurgie* there is a paper upon the above subject by M. Edouard Lacroix, ex-Prosecteur de la Faculté, &c. The object of the paper is to point out and illustrate a principle, which the author believes to have a greater influence in producing the various displacements in fractures than the weight of the limb, the obliquity of the fracture, the action of the muscles, and the other causes which have generally been regarded by surgeons as the active agents in producing these.

He states that he was led to pay attention to the subject by observing how frequently the displacements met with in practice were at variance with those which authors, led by the known action of the muscles, had been in the habit of describing them to be.

" Surgeons," he says, " have very properly taken into consideration the obliquity of the fracture and the weight of the limb ; but after these, they have been in the habit of considering the muscles as acting without any thing to counterbalance or modify the direction which they give to the fragments." The fact, he remarks, which struck him in the course of his observations, was the great resemblance existing between the bones in which deformity had been produced by badly set fracture, and those in which it had been the consequence of rickets,—a resemblance so great in some instances that it was difficult at first to say to which of the two it was to be referred. " I was thus naturally led," he continues, " to draw a comparison between those bones which had undergone some change in their powers of resistance from these causes. It was evident that the only difference existed in the greater or less facility with which the bones yielded to the action of the muscles. In rickets, the curve is gentle and equal, because the bone yields but slowly, and in all parts equally ; whereas in fracture, it is abrupt, and limited to the part where the bone is deprived of its power of resistance.

The fractured bone, however, he says, must be subject to the same laws of muscular contraction, because its extremities are not entirely free,— fibrous and muscular bands necessarily limiting the displacement of the fragments. This condition of parts, he concludes, constitutes a very great difference between fractures and dissected preparations, in which, after isolating the muscles and depriving the bone of its coverings, surgeons have been in the habit of studying the action of the muscles upon the divided bone. M. Lacroix believes that the natural curvatures of bones are dependent upon muscular contraction, and that these curves are identical with those which we meet with in rickets and fractures,—the latter only differing from the former in their being more marked.

He then concludes generally, " that displacement of the fractured bones takes place according to angles which correspond in plane and direction with the natural curvatures of bones." He supports his doctrine by reference to the preparations in the museum of Dupuytren, referring to them by number. We have not space to follow him throughout, but shall give one or two of his illustrations in different fractures. Before doing so, however, we may remark, that we cannot consider the principle which M. Lacroix lays down to be so general in its application as he would lead us to believe ; although we are willing to grant that it exerts an influence, and perhaps a very powerful one, in determining the nature of the displacement. We cannot help thinking that M. Lacroix has been too anxious to lay down as a general law what ought only to have been regarded as one amongst the many causes which lead to the various displacements in fracture. He has, if we may judge from his statements, been very naturally led to do so from the examination of the preparations to which he has had access ; but had he extended his inquiries, we have no doubt that he would have been led to attach to his observation its true value. We shall advert to M. L.'s observations on two fractures only, as confirmative of what we have said. The first we shall refer to is that of the clavicle, and the second that of the shaft of the femur. M. Lacroix, we may remark, takes the descriptions of Bichat and Boyer, as representing the opinions of the generality of surgeons.

In the works of both of these authors we find the displacement of the external portion of the clavicle in fracture described as being downwards, inwards, and *forwards*. " If," says M. L., " we take the descriptions of these authors as the most detailed and exact, we find that they can only have described those fractures situated at the inner third of the cavicle. If we pay attention to the law which I have laid down, we find that when the fracture is situated at the union of the two external with the internal third, the displacement of the external fragment is forwards ; whereas, if it be seated at the union of the two internal with the external third, the acromial portion is carried backwards, and that whatever be the direction of the obliquity of the fracture." In this fracture the real state of matters appears to bear out what is said by M. Lacroix. We have examined a good many preparations of fractured clavicle, and we have found, we may almost say without exception, that the fact is as stated by him. The fracture in the outer curve, we may remark, is by far the most common ; in fact, it is rare to meet with fracture at the inner third. The fractures of the shaft of the femur do not, we believe, correspond so closely with the descriptions given by our author ; in fact, the exceptions are so frequent as to deprive his explanation of all claim to the title of a general law. " The examination of the numerous preparations," says M. Lacroix, " in the museum of Dupuytren, shows that whatever be the seat of the fracture—whether it be simple or comminuted—the upper fragment is placed in front, and forms in this direction a projection more or less considerable, more or less acute, and pointed outwards. The extremities of both superior and inferior portions are directed outwards, and the axes of the fragments form an angle, the concavity of which looks inwards." M. Lacroix appears to have examined the preparations in the museum of Dupuytren only, and we have no doubt that in so far as they went he was amply borne out by them ; but this just shows the danger of forming general laws on limited observations.

In our own inquiries into this subject, we have by no means come to the same conclusion ; in fact, we find the cases which deviate from his general law almost as numerous in some respects as those which concur with it. In thirteen preparations, for example, taken from a private museum, we find the following to be the actual state of the fact :—In *nine*, the superior fragment was anterior, as described by M. Lacroix, and in four posterior. In *five*, the curve was *outwards*, as described by him ; in *six*, *inwards*, showing a result very different from what we should have been led to expect by him. We have also run hastily over the preparations in some other museums, and in them likewise we find the exceptions very numerous.

The obliquity of the fracture, and its seat, as well as the mode in which it has been produced, appear to exert a much more powerful influence than the law laid down by our author. This was clearly shown in many of the preparations to which we have referred above. It was evident, for instance, that it was to the direction of the obliquity of the fracture that in so many cases the inferior fragment was anterior to the upper one, instead of being posterior to it, as described by M. Lacroix ; the obliquity in these cases passing from behind upwards and forwards in the lower fragment, and the reverse of course in the upper. In like manner, the influence of the seat of the fracture was well shown in these ; the fracture in almost all those in which inversion or the curve inwards existed—constituting, as we have said, the majority—being through the lower part of the shaft, the adductors being thus allowed to act almost without antagonist.

We do not think it necessary to follow M. Lacroix further in his observa-

tions. We have pointed out sufficient grounds, we conceive, to show that the explanation which he gives is by no means entitled to the appellation of a general law, but can only be regarded as one amongst many causes which, under certain circumstances, determine the character of the displacement in fracture.

Case of Ligature of the Common Iliac Artery for Aneurism of the External Iliac. By RICHARD HEY, Esq., Surgeon to the County Hospital, York.

WE insert the following case because we believe it to be the first instance in which the common iliac artery has been tied successfully, in this country, for aneurism. This artery has been tied repeatedly by different surgeons, but only once successfully for aneurism, so far as we can recollect, by Dr Mott. It was first tied by Professor Gibson, in a case of gunshot wound, but the patient died on the fifteenth day. It has likewise been tied by Mr Crampton of Dublin, and Mr Syme, but in both the issue was unfortunate. In the latter case any other issue could scarcely have been hoped for, as mortification had commenced previously, requiring subsequently the amputation of the limb. The ligature of the artery had been performed as affording a chance, although a desperate one, of saving the life of the patient. In 1833, Mr Guthrie tied this vessel for a tumour supposed by him to be aneurismal, but which proved to be of a medullary character.

" Mr Taylor, aged forty-one, residing at Acomb, near York, seen in consultation with Mr Nelson, surgeon, and Mr Ellis, on the 22d November 1843. I received the following history of his case :—

" On the 10th of this month Mr Taylor perceived a stiffness and uneasiness in the left groin, and on examination found a small hard tumour immediately above Poupart's ligament, midway between the anterior superior spinous process of the ilium and the tuber of the pubis. Having been occasionally subject to scrofulous tumours, ending in suppuration, he supposed this to be an enlarged gland, and therefore at first took but little notice of it ; he showed it, however, to his medical attendant, who prescribed suitable remedies for its removal. On the 13th he was suddenly attacked with severe pain in the tumour, and on the following morning it was found to be much increased in size ; and now, for the first time, a decided pulsation was observed in it ; pulse 90. From this time until the 22d the tumour made perceptible advances in size daily, accompanied with pain along the course of the anterior crural nerve.

" November 22. The tumour is now the size of a pretty large orange ; the impulse very strong. It was, however, easily emptied by moderate and continued pressure, instantly filling again when the pressure was removed. Pressure on the aorta had the same effect, but in a lesser degree. When the base was grasped, the fingers at every pulsation were forcibly separated, and equally so on every side. There was clearly aneurism of the external iliac artery.

" November 28. The tumour rapidly increasing in size ; and as there seemed to be no alternative but placing a ligature upon the common iliac artery, or speedy death, I thought it my duty no longer to delay acquainting him fully with the state of the case : he was not prepared, however, at present, to decide upon the subject.

" November 30. The tumour now, from having a round and uniform surface, had become conical, like the pointing of a large abscess, the skin also much thinner, red, and shining. We therefore urged upon our

patient the necessity of a speedy determination ; and at his request, my brother, Mr William Hey, of Leeds, was requested to meet us in consultation.

" December 2. We met this day, and found the tumour within the last forty-eight hours had so much increased as to render any further delay of the operation extremely hazardous ; and as Mr William Hey concurred with us in the propriety of attempting to save our patient's life by the means already proposed, and as he was now quite willing to submit to it, we determined to wait no longer than the following morning.

" Sunday, December 3. I proceeded to place a ligature on the common iliac artery. It seemed out of the question to attempt tying the external iliac, because, from the very large size and extent of the sac, it was evident that there would not be room for a ligature between that and the bifurcation of the external and internal iliacs ; and in addition to this, the probable state of that artery made it unwise to run such a risk, even if it had been practicable.

" There were present at the operation Messrs Nelson and Ellis, Mr William Hey, and Mr Teale, of Leeds ; Mr Dodsworth and Mr Reed, of York ; to whose kind and very able assistance I feel deeply indebted.

" The tumour now occupied the whole of the left iliac fossa, its base projecting considerably below Poupart's ligament inferiorly, and superiorly extending to within less than an inch and a half from the navel, being six inches across from above to below, and six inches and a half from side to side ; projecting also from the plane of the abdomen fully three inches.

" The patient was placed on his back on a mattress, his shoulders moderately raised. The incision was commenced two inches and three-quarters above the navel, and exactly three inches to the left of the median line. This was carried down moderately curved to the base of the tumour about six inches, and was afterwards enlarged by an angular continuation one inch and a half in length. The fibres of the external and internal oblique muscles and transversalis being successively divided, the transversalis fascia was readily raised by means of a director, and carefully opened out through the whole length of the incision. The peritoneum now protruded in some measure ; it was, however, kept down without much difficulty ; and being gently drawn towards the opposite side, I was enabled slowly to insinuate my fingers behind the peritoneum, gradually separating it from its cellular attachment to the parts beneath. The common iliac artery was easily reached, and upon compressing it with the fingers, the pulsation in the tumour ceased at once. A little time was occupied in scratching through the sheath of the artery with the point of the aneurism needle ; this being accomplished, the needle was passed under the artery from within outwards, armed with a double ligature of staymaker's silk, waxed. By holding aside the peritoneum and viscera, we now obtained for a moment a view of the artery, and ascertained that nothing else was included in the ligature ; this being tied with the fingers close down upon the artery, all pulsation in the sac entirely ceased, and never afterwards returned in the slightest degree. The exact position of the ligature was, I believe, an inch below the bifurcation of the common iliacs. The wound was closed with six sutures and strips of adhesive plaster ; and over the whole a coating of lint dipped in strong mucilage. Time, 25 minutes. The patient was now a good deal exhausted, although so little blood had been lost that it had not been necessary to take up a single bleeding vessel ; he vomited also some brandy and water which had

U

been given to him during the operation. He took, however, a cup of boiled milk, which was retained.

" Evening. Patient had been very restless and uneasy after the operation for some hours. A camphor draught, with 25 drops of Battley's sedative, had had the effect of composing him. There was now moderate reaction, pulse 90. The wound continued still very uneasy."

By the 4th January the patient was quite well.—*Provincial Medical and Surgical Journal*, No. 5, May 1, 1844.

MATERIA MEDICA AND DIETETICS.

Inoculation with Tartar Emetic to produce a Counter-Irritant Eruption on the Skin.

Dr Debourge, in the " Gazette des Hôpitaux" for January 1844, proposes to avoid some of the inconveniences of the tartar emetic ointment by inoculating the skin with tartar emetic. He puts a pinch of tartar emetic on a piece of glass, and moistens it with water ; then taking a little of the moist mass on the point of a lancet, he makes as many punctures in the skin as he thinks necessary. These punctures very soon inflame, and the resulting pustules may be enlarged at pleasure, by applying a solution of tartar emetic by means of a hair-pencil. This plan seems worth a trial, which we have not yet made, because we continue to find the croton-oil liniment answer so admirably for the purposes of counter-irritation.*

Effect of Ergot of Rye in Palsy of the Lower Extremities.

Dr Ducros of Marseilles (*Journal de Clinique de Marseille*) reports a case of palsy of the lower extremities of long standing, in which the ergot of rye was productive of much benefit. The patient, at eighteen years of age, had a severe fall on his back, which was succeeded by weakness of the lower extremities. His limbs soon recovered their natural strength, and he remained well for a year. The history of the case during the next twenty-five years is summarily disposed of in these few words : " Au bout de ce temps, rechute." The patient was forty-four years of age when he came under Dr Ducros' care, and he was then affected with complete palsy of the lower extremities along with incontinence of urine.

At first about 4 grains (25 centigrammes) of the powdered ergot were administered in pills ; this quantity, we presume, was taken at least daily, though that is not stated. The dose was progressively increased, so that after rather more than six weeks, he had come to take upwards of 20 grains at once (1.50 gramme).

At this time the patient presented a remarkable improvement. He could now stand firm on his legs, and walk ; he could also control the discharge of urine. Soon after it became necessary to diminish the dose of the ergot, on account of the tingling produced by it in the soles of his feet.

The use of ergot in diseases of the nervous system has been hitherto little attended to, or rather almost entirely neglected. One case, such as that just referred to, will not go for much, especially of a disease like paraplegia, which has sometimes disappeared suddenly without any treatment—most probably because the disease has slowly ceased by the efforts of

---

* Scottish and North of England Med. Gazette, No. V.

nature, often a considerable time before the patient himself discovers that he is cured. But in confirmation of the probable good effects of ergot in the above case, we should notice the sufficiently well known influence of ergot on the nervous system, analogous to the effect of narcotics, marked by giddiness, delirium, and dilatation of the pupil, while we learn from Bayle's learned memoir on ergot, that there are other cases of paraplegia in which it has been found beneficial.*

PATHOLOGY AND PRACTICE OF MEDICINE.

Connexion between Hydrocephalus and Disease of Lungs. M. MAUTHNER.

IN 229 dissections, made between the years 1837 and 1842, of children who had died of encephalitis and acute hydrocephalus at the Foundling Hospital of Vienna, M. Mauthner found the following appearances :—In 172 cases, serum in ventricles with or without material alteration ; in 123 cases, where the effusion was copious, tubercles occurred in the lungs 43 times (20 of these with hepatisation) ; hepatisation without tubercles, 90 times ; and complete solidification of a part of the lungs in 7 cases ; hydrothorax, 14 times ; hydropericardium, 61 times ; ascites, 10 times ; œdema of the lungs, 39 times : so that in 133 cases where there was effusion of serum in the ventricles, there were found in 86 mortal diseases of the lungs, besides many affections of the abdominal viscera, among which tubercles of the spleen occurred 42 times.

Inflammation of Columnæ Carneæ a Cause of Insufficiency of Valves.

M. HAMERUJK of Prague has published some interesting observations on inflammation of the muscular substance of the heart, which he believes to be frequent, and to occur usually in the left ventricle. The anatomical characters are hyperemia, infiltration with exudation into the cellular tissue and atrophy of the muscular fibre, suppuration, abscess. The muscular tissue becomes flabby, and when examined with the microscope is found to have lost its spiral appearance, become less smooth, and covered with little pulverulent bodies.

M. H. thinks it difficult in some cases to distinguish inflammation from fatty degeneration of the heart, and relies chiefly on the microscope and the application of heat for establishing the diagnosis. The object of the paper, and it is an important one, is to show that without any disease of the valves themselves, they may be rendered insufficient by inflammatory disease of the columnæ carneæ having destroyed the tonicity of these muscles, and rendered them incapable of duly performing their function of closing the valve.

Vaccination latent for Three Years.

M. WENINGER of Vienna has published a case where vaccination was performed on a child eight months old in July 1837, and did not become developed till July 1840, thus remaining latent for three years ! ! !

* See Bayle,—Bibliothèque Thérapeutique, tome iii. p. 548.

Tartar Emetic as a Remedy for Syphilis.

M. WILLEBRAND has been employing tartar emetic for the treatment of syphilis in the Military Hospital at Helsingfors, the capital of Finland. Employed in primary syphilis, the sores healed in from 12 to 20 days. It was not, however, tried in indurated chancre. Its effects were most strikingly beneficial in secondary affections of the throat and scrotum. In thirty cases the symptoms disappeared in 11, 12, or 15 days. The tartar emetic was usually continued six or eight days after the disappearance of the symptoms.

When given in the skin affections, S. roseola disappeared in a few diseases. The squamous class were more unmanageable, lasting from 20 to 25 days. The inconveniences attending the prolonged use of the remedy often required it to be given up before the completion of the cure.

The tartar emetic was exhibited in doses of half a grain six or eight times a-day. The first doses commonly produced vomiting, but tolerance was usually established on the second day. To this, however, there were exceptions: one case is recorded where the dose could not be raised above the eighth of a grain without acting at once on the stomach and bowels. [We have observed the most remarkable difference in this respect in exhibiting tartar emetic pretty extensively for chest affections. We usually give it in doses of half a grain every hour, in some cases the first or first and second dose provoke vomiting, in other cases it does not occur till the third has been swallowed; sometimes the patient does not vomit at all, while in others, again, the remedy provokes vomiting at every dose. In one case of a child of two years old, ℥ii. of antimonial wine were taken in doses of a tea-spoonful every hour without emesis, while two tea-spoonfuls of the same preparation, when swallowed by ourselves, produced severe nausea and vomiting]. The general health was also carefully attended to by M. W.

Ioduret of Potassium in Saturnine Affections.

AT a late meeting of the Academy of Sciences, MM. Natalis Guillot and Melsens called the attention of that body to the favourable results of the ioduret of potassium administered in the treatment of saturnine diseases. Hitherto they have administered this substance alone, allowing the patients to live as usual, when their state admits of it, as regards food. They gradually increase the dose to ℨiss or ℨij a-day. From six to ten ounces of the ioduret has appeared to them sufficient to complete the treatment. Their object in giving publicity to these facts is, they say, to give rise to further experiments on the therapeutic action of the ioduret of potassium in these affections.

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

Pelvic Inflammation after Parturition.

IN Guy's Hospital Reports for April of this year, there is a communication on a subject which is very important to those who take an interest in obstetric medicine and surgery. It is by Dr Lever, of whose labours we have had occasion to report so favourably in our last number. Dr Lever furnishes the results of his experience in nine cases of pelvic abscess occurring at various periods after parturition; in one instance, so late as eight weeks after this event. Dr Lever considers the inflammation of a chronic character, an opinion by no means happily chosen, and which, were it not

that we might be considered hypercritical, we could easily refute. These cases, though they must have been occasionally met with, have been little noticed in our literature since the time of Levret, probably because they almost always terminate favourably. The young practitioner, however, whose mind is often haunted with the consequences of inflammation in the puerperal state, ought to feel under considerable obligations to Dr Lever for his excellent practical communication. In six of the cases the abscess burst per vaginam, in three at either groin; in one of this number the contents were discharged both at the groin and by the rectum; in one there was suppuration at both groins; in one of the cases the abscess followed an attack of puerperal fever; and in another of them, phlegmasia dolens succeeded to the abscess. In our own practice, we remember one case which supervened on uterine hemorrhage, two on puerperal fever, two after the use of forceps, one after an easy first labour; and in the last instance which occurred to us, an abscess formed at each groin after a first labour, which had been easy, and in which there had been no artificial interference; in one of these only did the abscess burst per vaginam, in none per rectum; and all of them happened within a fortnight after delivery. Dr Lever does not offer any decided opinion as to the cause, which shows his good sense, since such cases have been observed after easy as well as difficult labours—after deliveries where there was no interference, as well as subsequent to those in which artificial aid had been afforded. As, fortunately, *post mortem* inspections are rare, it would be hazardous to state, in decided terms, in what structure the inflammatory action commences; but we are certainly disposed to concur in Dr Lever's views on this head, by believing that the cellular structure of the pelvis is involved, as also one or more of the uterine appendages—an opinion supported by the contents of these abscesses being, in the majority of the cases, evacuated external to the peritoneum.

The most important point for consideration in these cases is the diagnosis. We know from experience how readily they may be confounded with other and more severe inflammatory affections in the puerperal state. Rigors, accelerated pulse, heat of skin, and pelvic uneasiness, are among the prominent features of these cases; but it is to be particularly remarked, that they are not attended by that anguish and general tenderness of the abdomen, so characteristic of those affections usually denominated puerperal fever;—that the uneasiness, though accompanied by a good deal of general disturbance, is more local, while the patient is completely alive to every thing around her. Sometimes the uterus feels larger than it ought to be at a period so distant after parturition as that at which the disease commences; but in other instances nothing unusual can be discovered by the most careful examination over the pelvic brim. Per vaginam, again, our investigations are not, in some cases, more satisfactory. Often, however, this canal feels very sensitive, hot, contracted, and very painful; and the patient shrinks during its exploration, complains of great uneasiness at some particular point, where, probably, we discover some swelling. Though we are not disposed to dispute the value of Dr Simpson's sound in cases of uterine disease, unaccompanied by tenderness of that organ, yet we cannot concur with Dr Lever in thinking that any sound, except sound sense, can be safe when the uterus is in a state of high irritation. We reprobate the practice of poking instruments into the uterus when highly excited.

Although we have admitted that these cases eventually terminate in a favourable way, nevertheless we consider an early distinction of them from

other more formidable affections of the last importance, if it were for no other reason than to prevent unnecessary depletion by the lancet, which would be certain almost of rendering the system most irritable, and incapacitating a woman for the important duty of nursing. Dr Lever's management of these cases is very judicious : leeches to the pained parts, warm fomentations, tepid ablutions of the sexual canal, enemata, and antiphlogistic regimen in the acute stage, but a generous diet afterwards, are the remedial steps.

FORENSIC MEDICINE AND MEDICAL POLICE.

Inhalation of Oxygen an Antidote to Poisoning with Carbonic Acid.

" An apothecary was engaged in a confined cellar in the preparation of nitric ether from a mixture of alcohol and nitrate of potass : during the process, a large quantity of carbonic acid and carbonic oxide were given off : his assistant, who was suddenly seized with a painful sensation in the head, and covered with perspiration, was sent out ; he himself however remained in the cellar 15 or 20 minutes longer, and, just as he was in the act of leaving it, he fell senseless on the steps. He was immediately brought into a chamber, where he lay motionless, with the eyes closed and the face of a pale yellow, with the exception of the cheeks, which, together with the lips, tongue, and hands, were livid ; the pupils were fixed and somewhat dilated ; all the senses had entirely disappeared ; the carotids beat violently, the action of the heart was frequent but weak, the pulse scarcely perceptible, and the breathing weak and irregular. The cold douche was used without benefit. In order to free the lungs and brain from engorgement, blood was drawn from the arm ; it was of a chocolate-brown colour, of the consistence of syrup, and very quickly coagulated. After this the breathing appeared somewhat more free, perspiration covered the body ; but the sensibility of the skin seemed in no degree increased, for a sinapism which was applied to the breast showed no effect upon it. As none of the means employed seemed to be of much use, a quantity of oxygen was prepared, in order by inhalation to oxidise the blood, overloaded with carbon, more rapidly than could be done by the inhalation of atmospheric air merely. After the patient had been in a state of insensibility for an hour and a half, he was made to inhale the oxygen for a few minutes. A remarkable reaction followed : the alæ of the nose dilated, the appearance of the countenance improved, the muscles of the jaw and mouth began to act when loudly addressed ; there was motion of the eyeballs, the breathing became normal, the pulse fuller, the skin perspired freely, and the patient seemed to feel the mustard cataplasm. After he had used, in the space of a quarter of an hour, two and a half quarts of oxygen, when loudly spoken to he awaked as if from sleep, and attempted to rise, but his sight had not then as yet returned. After the above state had lasted two hours and a half, and after he had slept for half an hour, the senses were completely restored, and some blood which accidentally flowed from the arm was again become scarlet. Some of the blood which was analyzed yielded 50·8 per cent. of carbon and 7·1 of watery fluid."—*Casper's Wochenschrift,* No. 47, 1843.—It appears to us that cupping should have been employed, as that mode of abstracting blood has been found the most beneficial in such cases. We may perhaps assume the dark colour of the blood as a proof that the diluted carbonic acid enters the lungs,—that in fact it acts as a poison, and not merely as an asphyxiating agent, by closing the glottis.

Comparative Weight and Length of Fœtus born at the full Time.

As there are numerous questions which arise on trials for infanticide, &c., where the weight and length of the fœtus at birth is of importance to be known, we are induced to extract the following recent observations of M. Elsaesser of Wurtemberg :—

In 1000 children he found

13 weighed from 4 to 5 pounds.	318 weighed from 7 to 8 pounds.
158 ... ... 5 ... 6 ...	83 ... ... 8 ... 9 ...
417 ... ... 6 ... 7 ...	11 ... ... 9 ... 10 ...

The average weight to be deduced from this is 4 lbs. 28 *loth* (or half ounces). The lightest child weighed 4 lbs. 23 loth, and the heaviest, 9 lbs. 30 loth. M. E.'s results differ somewhat from those of other authors ; for example, Mde. Lachappelle met with one child at the full time weighing $3\frac{1}{2}$ lbs. Chaussier, in 1601, found 3 weighing 2 lbs., 31 of 3 lbs., and 97 of 4 lbs., and he also observed others weighing 11, 16, and $17\frac{1}{2}$ lbs. We think, however, with M. E., that these statements of Chaussier ought to be received with a due degree of caution ; such cases certainly present very rare exceptions to the general rule. M. E. found that

The average weight of 100 males was 7 lbs. $0\frac{4}{6}$ loth.
... ... females ... 6 ... 21 ...
The maximum weight of the males ... 9 ... 30* ...
... ... females ... 10† ... ...
The minimum weight of the males ... 4 ... 28 ...
... ... females ... 4 ... 19 ...

Of 200 children

The length in 11 was from 15 to 16 inches.
... ... 99 ... 16 ... 17 ...
... ... 75 ... 17 ... 18 ...
... ... 14 ... 18 ... 19 ...
... ... 1 ... 19 ... 20 ...

The average length of 100 males was 17 inches $3\frac{1}{2}$ lines.
... ... females ... 16 ... 8 ...
The maximum length of the males among 1000 children
was 19 inches 17 lines.
The maximum among the females 19 ... 1 ...
The minimum among the males ... 14 ... 15 ...
The minimum among the females ... 14 ... 9 ...

There is therefore a difference in length, as well as in weight, in favour of the male children. We are glad to observe that M. E. has also directed his attention to the comparative lengths of the supra and infra umbilical portions of the body. His observations will be of use in doing away with the absurd notion, so confidently put forth in most works on midwifery and medical jurisprudence, that in the child born at the full time the umbilicus is the central point of the body.

In 200 children the length of the supra-umbilical portion of the body was
In the males 9 inches $2\frac{1}{2}$ lines.
... females 9 ... ...
The length of the infra-umbilical portion was
In the males 7 inches 9 lines
... females 7 ... 7 ...

---

* In several cases. † In one case only.

The difference of length between the two portions was

<div style="text-align:center">In the males   1   inch   3·40 lines.
females   1   ...   3·57   ...</div>

In one case the infra-umbilical portion was 3 lines longer than the supra-umbilical ; in another (one only) they were exactly equal. M. E. has also ascertained, that the distance from the ensiform process of the sternum to the umbilicus is generally about one inch longer than from the umbilicus to the symphysis pubis. The author also concludes from his observations, that variations in length are much less than those in weight, the former being : : 15 : 20, but the latter : : 5 : 10.—*Henke's Zeitschrift für die Staats Arzneikünde*, No. 42, tom. iv.*

PART IV.—MEDICAL MEMORANDA.

EDINBURGH MATERNITY HOSPITAL.

FOR some time past the attention of many of our influential citizens and medical brethren has been directed toward the establishment of a Maternity or Lying-in Hospital. Since the hospital of the late Professor Hamilton has ceased to exist, the want of clinical obstetrical instruction on the great scale of a Lying-in Hospital is a stain on the medical school of Edinburgh, in other respects one of the first in Europe ; but when, apart from any advantage to our medical school, we consider the object in view solely in a philanthropic light, or when we regard the mere motives of humanity which have prompted the attempt to establish such an institution, we are gratified to know, that after many consultations and much tedious deliberation, matters are so far in train that we may hope to have this desirable and much wanted institution in early operation. It is already under noble and distinguished patronage, and we are assured that the highest in authority in these realms will be happy to confer on an institution intended to relieve the sufferings of her sex the benefit to be derived from her patronage. It will not, like the last, be the hospital of an individual, but it will be the hospital of the public—to apply for aid will be all the recommendation required. A medical staff has already been appointed ; and the selection that has been made does the highest credit to the judgment of the directors, and gives us the fullest guarantee of their capability and willingness to direct the affairs of the institution in such a manner as will be most conducive to its utility. The following gentlemen have been appointed :

<div style="text-align:center">Consulting Physicians—Dr William Campbell, Dr Beilby.
Ordinary Physicians—Professor Simpson, Dr Moir.
Assistant Medical Officers—Dr Charles Bell, John Niven, Esq., Alexander Thomson, Esq., W. S. Carmichael, Esq.
Consulting Surgeon—Dr Pagan.   Ordinary Surgeon—Alex. Zeigler, Esq.</div>

---

* The Wurtemberg pound is equal to 1.0314 English avoirdupois, and the inch is equal to nearly ·94 of an English inch.

Part I.—ORIGINAL ARTICLES.

Cases of rare Malignant Disease of the Ovary. By J. C. W. Lever, M. D., Member of the Royal College of Physicians, London; Assistant Accoucheur at Guy's Hospital, and one of the Lecturers on Midwifery at that Institution; Author of a Practical Treatise on Organic Diseases of the Uterus.

Case 1.—Mrs F———, æt. forty-six, the mother of six children, the youngest six years of age, consulted me in April 1843. She stated that, two years previously, she suffered from pain in the region of the liver, for which she placed herself under the care of a distinguished physician, who ordered blisters and various modes of relief, and at last advised her to leave London. This she did, and the pain subsided.

Eighteen months afterwards she perceived, immediately above the left groin, a hard moveable swelling of a circular form, unattended with pain, and even firm pressure caused but little suffering. Its size increased, and it was associated with menstrual irregularity, loss of appetite, languor, despondency, &c. She again sought the advice of the same physician, who, after a very careful examination, pronounced the uterus free from disease, but stated that in his opinion the ovary was the seat of mischief. The treatment prescribed was simple and palliative, but the tumour rapidly enlarged.

In April 1843 I first saw her. Her countenance was pale and anxious, her alæ were compressed, her cheeks hollow and drawn in, the superficial veins of the body generally were very distinct, and she was much emaciated. There was some swelling of the left thigh, leg, and foot, which indented when pressed by the finger. The abdomen was of irregular form, from a tumour which occupied the left side, apparently rising out of the pelvis. This tumour had a firm but elastic feel; it could be traced into the left loin as high as and under the ribs, and in front it could be detected as high as the stomach,

although its superior margin could not be accurately defined ; it extended to the right of the mesian line, and on its surface there were three other tumours the size of walnuts, but flattened, which could be made to roll over the larger tumour very dis-. tinctly. Although she complained of great pain in the seat of the large tumour, yet she did not experience much uneasiness when it was pressed upon, but the slightest examination of the smaller growths caused her considerable suffering.

The liver was enlarged, and pressure over its region caused pain ; her bowels were moved daily, and occasionally with her motions a sanious fluid was mixed ; her urine was clear, and she stated that at no time had it been mixed with blood. There was considerable irritability of the stomach, the tongue was morbidly red, the papillæ elongated ; she was restless, worn out with pain and loss of sleep, and her pulse was quick, small, and irritable.

She was ordered,—Morphiæ acetat. gr. ss., o. n. et p. m.; with sod. sesquicarb. gr. x. ter die in aqua menth. virid. The pills gave her relief, the irritability of stomach subsided, but the tumour rapidly increased ; the lower extremities became enormously enlarged from serous infiltration ; this reached to the abdominal integuments, and into the abdominal cavity itself a large quantity of fluid was effused. In the course of a few days, symptoms of effusion into the cavities of the pleuræ manifested themselves ; and, after enduring with heroic fortitude her aggravated sufferings, she expired on the morning of July 24.

The body was examined eighteen hours after death. The integuments of the abdomen, upper and lower extremities, were glossy, distended, and œdematous.

Thorax.—(Right side). About sixteen ounces of yellowish fluid were effused into the cavity. The posterior surface of the middle lobe of the lung was hepatized ; in the apex of the upper lobe there were a few scattered tubercles. (Left side). Some slight but old adhesions existed in the upper part of the cavity, and in it were about eighteen ounces of sanguinolent serum. In the apex of the lung, also, there were some crude tubercles. The pericardium contained four ounces of lightish red serum. The heart was small, œdematous, flabby, and readily lacerable ; its valves were healthy.

Abdomen.—The liver was large, about twelve lbs. in weight, universally infiltrated with tubercles varying in size from that of a pea to a small apple. They presented the true cerebriform character. The gall-bladder was large, and distended with thin greenish bile. The pancreas was large, and firmly fixed ; its tissues were infiltrated with fungoid tubercles varying in size. The spleen was healthy ; the stomach small, but free from disease ; the small intestines healthy, the large intestines small and empty. The mesenteric and meso-colic glands were

enlarged, and affected with the cerebriform disease. The right kidney was pale and granular. The uterus was healthy. The right ovary had on its anterior aspect one tubercle about the size of a small shot.

The tumour which had attracted attention during life had emanated from the left ovary ; it had surrounded and compressed the left kidney, which was small, pale, and granular, and had ascended behind the transverse colon as high as the inferior curvature of the stomach. On making a section, it presented the characters of true cerebriform cancer. The moveable tumours that could be distinctly felt on the surface were developments of the disease in the omentum.

The head was not examined.

Case 2.—Miss T.——, æt. thirty-six, of dark sallow complexion, whose occupation in life has been that of a governess, was seen by me on the evening of January 19, 1844. She was much exhausted by a journey of seventy miles ; and prescribing some moderate stimulant, the investigation of her case was adjourned until the following day. For five months she complained of difficulty in passing her urine, and a constant desire to micturate, attended with pains during the passage of the water, as well as occasional heavy pain above the pubes and in the left iliac region. During the first two months of her illness her catamenia appeared at the proper time, but for the last three periods they have been suppressed. The medicines prescribed by her attendant failing to relieve her, he instituted a vaginal examination, and discovered a tumour which he pronounced " ovarian."

The patient was thin and sallow, her conjunctiva blanched, her pulse small and quick, the action of the heart was readily excited, the respiration regular and normal. The abdomen externally was flat, the parietes very thin ; and in the left and inferior part, extending from the left iliac region to above the pubes, a solid, hard, oblong tumour could be felt, about the size of a duck's egg, irregular on its surface, and very moveable, obeying the impulse of the hand, as well as changing its situation according to the position of the body. *Per vaginam* this tumour could very readily be felt at the upper and left side of the uterus, so that its thickness could easily be estimated by one finger in the vagina and another on the surface of the abdomen. When the tumour was depressed in the pelvis by the hand placed upon the abdomen, the uterus as well as the tumour protruded into the vagina ; but still the uterus could be moved independently of the tumour itself, showing their want of connexion, or rather that, if attached, the connexion was not intimate. The os uteri was small, and the attempt to introduce the uterine bougie causing much pain, its employment as a means of diagnosis was desisted from. The catheter passed into the bladder found this

viscus small, and, as the abdominal parietes were very thin, the point of the instrument could be felt anterior to and below the tumour. The urine was muddy when drawn off; it became perfectly clear on boiling. *Per rectum* the uterus could be felt rather large, as also the tumour pressing upon the bowel and diminishing its calibre. (The bowels were usually constipated, and she had suffered from hemorrhoids.) She complained of great numbness and pain in the left thigh and leg, which she stated was occasionally swollen, but when examined it was not found to be larger than the right. The pain and numbness were increased by lying on the left side. The treatment prescribed consisted in the administration of sedatives to allay pain, stimulating tonics, and a due supply of bland nutriment; but she became more and more exhausted, and died about mid-day on the 30th January.

Permission was given to inspect the abdomen, which was done about twenty-six hours after death. It was tense from tympanitic distention, and indistinct fluctuation could be readily felt. On opening the parietes, about one pint and a half of straw-coloured serum was found in the cavity; there were no traces of either old or recent peritonitis. At the lower part of the abdomen, on the left side, rising from the pelvis, a tumour came into view, of a yellowish-gray colour, its surface nodular and irregular, tolerably firm in its texture, and very moveable. It was anterior to the left Fallopian tube, but not connected with it; the left ovary was lost in the development of the tumour. On making a section, numerous light-coloured lines could be seen, showing its cystiform character; and the section in some places presented a lemon-yellow colour, in others it gave a reddish appearance. When the section was made, a considerable quantity of thin yellowish fluid was poured out. Several of the nodules on the surface of the tumour were examined; some were solid, but the exterior membrane or cyst was of a lighter colour than the interior; others consisted of a capsule, more or less thick, containing fluid varying in density and colour from a light lemon to a dark brown, and from the fluidity of serum to the thickness of treacle. When the uterus was drawn upwards and forwards from the cavity of the pelvis, a similar tumour on the right side came into view, globular in form, but with an irregular surface, similar to the tumour on the left side. It also had no connexion with the Fallopian tube; but the ovary itself was lost in the structure of the tumour. The uterus presented no abnormal appearance; it was large for a virgin organ, and some of the muciparous glands of the cervix were prominent.

The stomach, large and small intestines, were distended with flatus, pale in colour, and their coats remarkably thin. The liver was pale, *wrinkled by tight-lacing, and throughout affected with encephaloid cancer.* The spleen was small; the pancreas

healthy; the kidneys large, flabby, and pale. The mesenteric and meso-colic glands were all enlarged; some were soft, as if from tubercular degeneration; others were firm, presenting a yellowish-red colour on division; whilst a third class, when a section was made, showed a surface firm in some spots, soft and cerebriform in others.

Permission was not given to inspect the other cavities.

A microscopical examination of the morbid structure was made by Mr Birkett, demonstrator of anatomy at Guy's Hospital, and he reports :—" The mass was firm but easily lacerable, containing opaque and somewhat translucent material, apparently cystiform. It consisted of single and double nucleated cells, with bicaudate cells. A considerable quantity of fibre was present."

———

Practical Observations on some of the Chronic Diseases of the Stomach, generally known by the symptomatic Names of Cardialgia, Gastrodynia, Pyrosis, Neuralgia, &c. By WILLIAM STRANGE, M.D., M.R.C.S. Edin., Surgeon to the Ashton-under-Lyne Dispensary.

CHRONIC disorders of the stomach and other digestive organs, arising either in consequence of existing organic disease, or of what is often erroneously called functional derangement, present themselves so commonly to the observation of the medical practitioner, and so much has been written upon their pathology and treatment, that it would be almost impossible to advance any thing new or striking upon the subject. Dr Abercrombie, with many other authors of modern date, as Andral, Barras, Johnson, Paris, and Wilson Philip, have given us a collection of cases and observations which may be said to include amongst them every phase and character which this protean disease can assume.

Neither is there a greater paucity of remedies—prophylactic, dietetic, and curative—than the immense variety of dyspeptic affections would lead us to wish for. Scarcely an article of the materia medica but has either been sanctioned by long usage, or been recommended by the sanguine eulogiums of individual practitioners, as serviceable in some one or all of these affections. We should omit many were we to enumerate all the vegetable bitters and tonics, purgatives and emetics; the alkalies, alkaline earths, metallic oxydes, salts of iron, copper, zinc, bismuth, and arsenic; mineral acids and waters; galvanism, hydropathy, homoeopathy, &c.

It would be merely idle, therefore, to occupy space devoted to the advantage of the profession with such a subject, were it not that, notwithstanding this richness of detail, and vast amount of detached and isolated observations, there is a great want of

connexion between the therapeutic and the pathological knowledge of gastric diseases prevalent in the profession, and which leaves a hiatus in the chain of observation most embarrassing in practice. It is having felt the want of appropriation of the remedy to the particular character of the disease, which first led me to pay particular attention to this subject; and I feel confident that success in the daily treatment of these most common ailments can only be arrived at by careful observation of the different *varieties* of dyspeptic disorder, coupled with a patient and extensive application of therapeutic agents and therapeutic knowledge, based upon sound physiological theories. The young practitioner, until he has made a classification (at least in his own mind) of gastric disorders, will be constantly puzzled in his choice of remedies, and the more so, as a thorough knowledge of their therapeutic actions is only to be obtained by long observation and repeated failure and disappointment.

To those practising in the midst of a dense population in large towns, particularly if they be mercantile or manufacturing, stomach disorders are every day presenting themselves. The observations I am about to make are based upon personal attention to more than 1600 cases, of more or less serious character, occurring in a period of a few years.

Most of the works on indigestion which have issued from the press of late years are sadly deficient in what I have above stated to be so necessary in practice, viz. a classification of the varieties of the disease, and a correct definition of the several pathological conditions upon which they depend. Without something of this kind the treatment of gastric disorders must be mere empiricism. If a proper division, founded upon the essentially distinct morbid conditions in the coats or fluids of the stomach had formerly been made, the now exploded doctrine of " gastrite chronique " would not have been applied to all the derangements of the digestive apparatus; nor such fatal practice as the indiscriminate use of the lancet, leeching, counter-irritation, and mercury, have been resorted to,—means which, in five cases out of six, I conceive to be not only useless but highly prejudicial.

Dr Abercrombie, however, in his excellent little work on the pathology of the stomach, and Andral, Barras, and others, have many observations of great value, showing the error of referring all painful affections of the stomach to a chronic inflammation; and the first author has thrown out some useful hints for a classification of these disorders, founded chiefly upon the nature of the pain and the period of its attack. He urges the necessity of a classification of the varieties, in order to a satisfactory application of the therapeutic and dietetic means of remedy. In attempting to separate the different varieties of gastric disorder, I shall follow as much as possible a natural method, both as to

the severity of the symptoms and the succession of the attack, when, as often happens, several varieties, each increasing in intensity, follow each other in a regular train of symptoms, constituting what may be called the most aggravated form of dyspepsia. I shall confine myself on the present occasion to remarks on those affections which are not necessarily dependent upon organic disease or cacoplastic action, but are generally (although erroneously) ascribed to functional derangement of the stomach. Such a mode of viewing the following class of disorders is, however, at best but doubtful; and I feel convinced that the more advances we make towards a correct knowledge of the nature of these affections, the more we shall find them to be dependent upon structural or organic, although not permanent, changes. An appreciable alteration in the structure and appearance of the mucous membrane, of the muscular coat, or of the vessels and nerves of the stomach, such as thickening of the mucous membrane, pale and flabby state of the muscular substance, varicose state of the veins, &c., are as much appreciable organic changes as are inflammation, ulceration, or scirrhus. Without denying the existence of any form of chronic (or functional) derangement of the stomach which may not be allocated to some one of the following divisions, and allowing that they may and often do run into each other in such a manner as to make it difficult to say to what pathological conditions the symptoms are to be attributed, the attentive practitioner will have no difficulty in distinguishing the following principal varieties, all of which have several forms.

1st, Dilatation, torpor, or, to speak with more precision, atony of the stomach.

2d, Atony with morbid irritability.

3d, Acute irritation.

4th, Neuralgia, generally accompanied with pyrosis, to which the name of gastralgia might perhaps be more properly restricted.

5th, Chronic gastritis.

Each of the above varieties I have many times been able to distinguish as a distinct and separate attack, although two or more of them are often met with coexisting, and pyrosis is in some measure met with in all of them. Generally, however, the order of succession, where an individual presents several varieties at once, is atony, morbid irritation, or else neuralgia, and then chronic gastritis; the persistence of which last may reinduce any of the former varieties.

1st, *Atony of the stomach.*—This kind of gastric affection, so common amongst the crowded population of manufacturing towns, presents the following symptoms and physical signs :—The tongue is large, flat, and flabby, filling the whole width of the mouth, its surface almost uniformly pale and without scurf, presenting the appearance of boiled veal or muscular fibre which has been macerated in cold water ; the face pale and flaccid,

corresponding remarkably with the tongue; the epigastrium distended, not painful, but uneasy on pressure; the abdomen in women often pendulous and flabby, sometimes hard and tender; the pulse is generally unaffected, or it is weak and small.

Patients affected with this form of disease complain that they have no appetite, or that they crave for things which are to them indigestible. Immediately after even a light meal, they experience a feeling of distention which compels them to loosen their dress, and makes muscular exertion exceedingly distressing. There is not often any very acute pain in the region of the stomach or along any part of the digestive canal; but sometimes to the sense of fulness succeeds a constriction about the lower part of the epigastrium, accompanied by eructations of gas sometimes mixed with acidity. There is flatulence, with irregularity of the bowels, a general state of costiveness being occasionally interrupted by a painful diarrhœa. A feeling of constriction, with pain extending through to the back, coming on two or three hours after meals, may be owing, as is supposed by Dr Abercrombie, to irritation created in the duodenum by the passage of insufficiently digested food into that bowel; and I have remarked that this pain very frequently coexists with a relaxed state of the bowels and painful motions. On the whole, however, a feeling of acute pain coming on periodically some hours after a meal is much more frequently met with in another well marked form of gastric disorder, viz. where the tongue exhibits a degree of redness round the edges, with furred centre; and where there is pain on pressing the epigastrium, denoting an irritable state of the mucous and muscular coats of the stomach. In consequence of the uneasiness and pain which are occasioned by all heavy articles of diet, persons affected with an atonic state of the stomach generally live upon slops, such as tea, milk, gruel, porridge, &c., substances which from their bulk tend to increase the previous distention, easily run into chemical changes, and are destitute of those stimulant properties which are necessary to arouse the torpid or diminished contractility of the stomach. Although opportunities of dissection are but seldom afforded us when the disease has not proceeded beyond this the least severe form, yet post-mortem examinations have often exhibited a pale, flabby, and distended state of the coats of the stomach, which has coexisted with the foregoing symptoms; and this, with our knowledge of the action of the stomach in the process of digestion, together with analogous affections of other hollow organs, warrant the conclusion, that a want of tonic contractile power in the muscular substance of the stomach is the real essence of this disorder. The flabby and pale tongue, the distended abdomen, with a sluggish state of the bowels, and pale skin, all denote a corresponding deficiency of vital power in all the organs of the body.

Accordingly, we are not surprised to find this variety of dys-

pepsia extensively prevalent amongst the inhabitants of large towns, particularly if the population be employed chiefly in crowded workshops and manufactories. The want of ventilation, the dust, smell, and uniform warmth of cotton factories especially, but principally the absence of the stimulant and invigorating properties of fresh cold air, are, in my opinion, the very predisposing causes most certain to induce this affection. Sedentary habits, with insufficiency of out-door exercise, too, undoubtedly produce the same condition of the digestive apparatus in the middle and upper classes of society.

Such being one of the commonest derangements of the stomach for which the practitioner is called upon to prescribe, it is essential to make choice of those remedies which possess at once a tonic and stimulating, but not sedative and enervating property. Were he, instead of doing so, to have recourse to antiphlogistic treatment, bleeding and counter-irritation, the patient would go from bad to worse, and a most intractable irritability of the stomach would be brought on, leading in all probability to organic and incurable disease. With the view of reducing the irritation, if any, and of gently stimulating the stomach, I have for a length of time mainly depended upon one substance, viz. the oxide of bismuth, which has also been highly extolled by Dr Paris and other authorities. When cases to which it is applicable are selected, I believe that not one in ten cases will occur in which much benefit will not be procured from its use. The manner in which I prescribe it is as follows :—

> ℞. Bismuth. trisnitrat. . . ℥j.
> Morphiæ muriat. . . gr. ss.—j.
> Acaciæ mucil. . . . ℥ij.
> Syrup. zingiber.,
> Tinct. cardam. com. ana, . ℥iij.
> Infus. cascarill. . . ℥v. M.
> ℥j. ter die.

This formula retains its appearance for a length of time; the mucilage suspending the bismuth in such a manner as to give to the mixture the consistence of cream. In pyrosis taken at the period of attack, and in that form of gastrodynia previously described, taken half an hour after meals, it immediately assuages the pain and promotes digestion. Whether the bismuth acts as an astringent, or as a tonic and stimulant, I know not; but in those cases particularly which will be hereafter described, where there is considerable derangement of the duodenum, this medicine acts like a charm.

Undoubtedly much benefit may be often obtained from the vegetable bitters with alkalies, and from the preparations of quinine and iron, particularly the sulphate and ammoniacal citrate, and from mineral waters. The good effect, however, of direct tonics I have always found most evident after the more

distressing symptoms have been removed by a perseverance for a short time in the above formula.

All kinds of fermented and spirituous liquors, as they debilitate as well as stimulate, are injurious in this affection. Purgatives must not be resorted to for the relief of the costiveness which so often accompanies this form of dyspepsia, as by over-exciting they afterwards debilitate the intestines. Gentle laxatives with tonics, such as small doses of aloes or colocynth with sulphate of iron, as recommended by Dr Abercrombie, or with sulphate of zinc, are the most beneficial.

2d, *Atonic morbid irritability of the stomach.*—Although a simple state of deficiency in the vital power or tonic contractility of the coats of the stomach often exists alone and uncomplicated with any other derangement of the digestive apparatus, yet it appears that when that state has existed for some length of time, symptoms of morbid irritation set in, and either supersede or obscure the earlier symptoms. Consequently I look upon this second form of dyspepsia as the natural consequence of a long continuance of the former atonic variety. Nevertheless there are numerous cases to be met with, in which there have been induced symptoms which indicate the existence of more or less acute morbid irritation of the mucous membrane lining the stomach and duodenum, without there having previously existed any trouble in the digestion which could lead us to suspect any derangement of the tonicity or innervation of those organs. Indigestible articles of food, affections of the mind, pressure upon the stomach, and bad living, are common causes of morbid irritation of the gastric mucous membrane.

The symptoms indicating this affection differ considerably from those characteristic of mere want of tone. The tongue is generally slightly red at the tip or round the edges ; there is a thin whitish fur all over the centre which cannot be scraped off ; a sense of heat in the throat, œsophagus, and sometimes in the stomach. The sleep is often disturbed, and muscular efforts are weakened. The appetite is always uncertain in this affection, following the remissions and exacerbations of the attacks. There is a general desire for savoury and solid food, although this almost invariably aggravates the symptoms. There is pain in the stomach during the whole time the food remains there, which is sometimes relieved by vomiting coming on from half an hour to three or four hours after a meal. Substances in small quantity are seldom returned. In some cases there is a sense of weight only at the stomach, until about two hours after taking food, when a sense of pain and constriction ensue, which lasts frequently until relieved by a relaxed but unsatisfactory motion. In these cases it has been no doubt rightly supposed that the irritable stomach pushes onwards the partially digested food into the duodenum, whence it is either forced back by vomiting, or passes out of the bowels, after giving

pain in its whole course, in a partially relaxed and often scalding motion. This morbid irritation of the stomach is sometimes accompanied by a degree of pyrosis, but not by any means in a constant manner. The regurgitations are more frequently composed of the mucus of the stomach mixed with acidity, gas, and the aroma of the food. We meet with pure cases of pyrosis, where a large quantity of a transparent water, called by the patents water-tornes, or in other instances of a glairy albuminous fluid, is pretty regularly ejected from the stomach after a paroxysm of severe neuralgic pain ; more constantly in another form of gastric disorder, viz. that in which the pain is not so constantly excited by taking food into the stomach, but comes on in a periodical manner at certain hours of the day, or after an interval of one or two days, or a longer period. This form I shall afterwards advert to under the designation of neuralgic irritation of the stomach, or gastralgia.

The medical treatment of chronic morbid irritation of the stomach will depend very much upon the previous duration of the disease, its complication with other morbid conditions, and upon the general state of the patient's constitution. When the disorder has not arrived at any very troublesome height, a similar treatment to that recommended for atony of the stomach will be found to answer very well. In more exaggerated cases, however, and especially if there be much pain and heat at the epigastrium, it will be well to begin with moderate counter-irritation, as a blister, two or three mustard poultices, or the ung. antim. tart. All drastic purgatives, particularly mercurial ones, should be avoided, as they increase the irritation. The oxide of bismuth, with infusion of rhubarb and magnesia, will be found to answer the double purpose of maintaining a steady action upon the bowels, and of correcting the acidity and heat of the stomach. The following is a good formula :

R Bismuth trisnitrat. . . ℥j.
Magnes. carb. . . . ℥ss.
Tinct. hyoscyami . . ℥iij.
Infus. rhei . . . . ℥viii. M.

One ounce of this mixture to be taken three or four times a-day. After the more acute symptoms have been reduced, the mixture of bismuth with gentle stimulants and tonics, as prescribed for the atonic state, will answer well ; and, finally, we may have recourse to quinine, iron, zinc, and other direct tonics.

Should there be much acidity with regurgitation some time after taking food, accompanied with a costive and unsatisfactory state of the bowels, the following pill taken regularly after the principal meal will be found very useful :

R Aloes in pulv. . . gr. iss.
Ferri sulph. . . . gr. ij.
Sapon. dur. . . gr. vi. M.
Div. in pill. ij. simul sumend.

The soap is a great addition to the aloes and iron pill in common use, as it unites chemically with the free acid of the stomach. I must reserve the dietetic treatment of these two varieties of gastric disorder for a future occasion.

(*To be continued.*)

Ashton-under-Lyne.

On Perityphlitis, or Inflammation of the Cellular Tissue adjacent to the Coecum. By William Seller, M. D., &c., one of the Physicians to the Royal Dispensary, Edinburgh.

It is now fifteen or twenty years since the attention of the medical profession in France and Germany was first drawn to the not unfrequent occurrence of inflammatory turgescence adjacent to the coecum, and yet the subject has hardly been adverted to in the most recent systematic works published in this country. The only work indeed of this description in which I have met with even a cursory notice of this inflammation, under the name of Pericœcal Inflammation, is Copland's Medical Dictionary.* No doubt Mr Syme seems to point to this kind of inflammation in a few lines devoted to iliac abscess.† But that term is not specific enough to denote the disease which I am going to describe; and, as he speaks of the treatment by an early aperture, and regards the disease as of most frequent occurrence after parturition, I am inclined to think that the cases on which he founds must have been of a different character from those which come strictly under the head of Perityphlitis or pericœcal inflammation. Cases are recorded of this form of inflammation which show the evil effects of rash interference with the lancet ;‡ and Dupuytren expressly says, that in his experience males are much more liable to it, under all circumstances, than females.§

The name Perityphlitis is used by Dr Albers in a memoir on coecal inflammation, and, though somewhat pedantic, I have adopted it for want of a better.‖ My attention was first drawn to this disease several years ago ; and the following account is founded on cases which I have myself seen, as well as on a careful study of the detached memoirs which have been published on the subject.

The disease in question is of an acute though insidious character, has its seat external to the peritoneum, in textures of a cellu-

---

* See Cœcum.
† Principles of Surgery, p. 328.
‡ Dupuytren, Leçons Orales de Clinique Chirurgicale, tome iii. pp. 343, 345.
§ Ibid. p. 336.
‖ Histoire de l'Inflammation du Cœcum (Typhlite), par J. Fried. Herm. Albers, Professeur de Médecine à l'Université de Bonn. Traduit par J. B. Pigné ; Encyclographie des Sciences Médicales, tome x. (1839), p. 181.

lar structure, and, unless neglected at first, is more prone to re-
solution than to the formation of pus; when suppuration does
occur, the pus is almost invariably evacuated by the rectum.

Tenderness on pressure, hardness, dulness on percussion, and
circumscribed swelling of the abdomen, adjacent to the anterior
part of the crest of the right ilium, while the integuments move
freely over the tumour, are the prominent and least variable
symptoms of this disease. In extent, the part so affected varies
considerably. But when, as happens sometimes, the swelling
reaches across the abdomen towards the linea alba, or upwards
obliquely towards the umbilicus, the disease should be suspected
of having lost its original singleness of character, and of having
passed into an inflammation of the peritoneum, or even perhaps
of the coats of the bowels.

Pain of the upper part of the thigh in front, increased on
motion, is either not a constant symptom, or is so trivial in the
majority of cases as to have escaped the notice of most observers.
In the cases which I have seen it was present, though not re-
markably severe; and in that with the particulars of which I
am best acquainted, it was the pain rising upwards from the
thigh which first led to the discovery of the real seat of the dis-
ease. Probably the function of the bowels is never altogether
unaffected; yet the degree in which intestinal disturbance is
present has a wide range. In the case first referred to, of which
a short report will be given hereafter, with the exception of colic
pains, rather severe for two or three hours, the bowels were
positively unaffected in their functions; there was not the slight-
est accumulation of feculent matter, and there was nothing that
could be called constipation. On the contrary, in a case which
I saw under Dr J. Duncan's care last winter, also to be noticed
hereafter, the obstruction of the bowels could not be overcome
by any means, and the event was fatal, apparently in connexion
with this cause. In the major part of the cases reported by the
original authorities on this subject—Husson and Dance, as well
as by Menière, and in most of the additional cases given in Du-
puytren's " Leçons Orales de Clinique Chirurgicale "—though
all of these are not simple cases of this affection, constipation
and colic pains were present until the remission of the disease.*
In a few instances diarrhœa preceded the attack.

Nausea, vomiting, and anorexia are sometimes among the
symptoms, but are by no means essential features of the disease.

Symptomatic fever is not usually very well developed; in the
simpler cases the pulse is natural or but slightly accelerated; in

* Husson et Dance, Mémoire sur quelques Engorgements Inflammatoires dans
la Fosse Iliaque Droite : Répertoire Général de Clinique Chirurgicale, tome iv. p. 74.
Paris, 1827. Menière, Sur des Tumeurs Phlegmoneuses dans la Fosse Iliaque Droite :
Archives Générales de Médecine, tome xvii. pp. 188, 513. Août, 1828. Dupuy-
tren, Leçons Orales, tome iii. p. 330, Des Abcès de la Fosse Iliaque Droite.

the severer, sharp, hard, or jarring, not often small or oppressed, as in inflammations of the intestines.

The disease is apt to come on insidiously; the colic pains which most commonly usher it in may last only for a few hours, or may recur at intervals for several weeks, before the swelling appears. The disease is of uncertain duration—chiefly, however, owing to the unequal periods over which the precursory symptoms are spread. When the precursory period is short, the disease uncomplicated, and the treatment appropriate, a cure may be looked for in ten or twelve days from the commencement.

A degree of induration, however, occasionally remains, which, though not dissipated for some time, gives but little inconvenience. There is observed in some patients a disposition to the recurrence of the disease for a longer or shorter period after it has subsided. In one person it occurred three times within a period of sixteen months. But this is not the usual course of the disease. In the experience of Dupuytren, it is stated to have been ascertained, that after having suffered from this inflammation, one person remained in perfect health for sixteen years, another for nine years, and a third for eight years.* It would be surprising if a malady of this nature should not be sometimes complicated with permanent abdominal disease; but the complete and rapid recovery in most cases, even under unfavourable circumstances, should preclude the idea thrown out by some authorities that it is generally connected in its origin with mucous inflammation in the adjacent parts of the intestine.†

The unfavourable terminations of this disease are suppuration and extension of the inflammation to the peritoneal lining of the abdomen, and even to the coats of the intestines, the latter termination being a supposition rendered sufficiently probable, but not yet confirmed by adequate evidence.

In the " Leçons Orales " of Dupuytren, the disease is termed abscess, and all the cases detailed terminated by suppuration; which might lead one to infer that resolution is a less common result than suppuration. The contrary of this is proved by reference to the other memoirs on the subject, with the exception of that of Albers, who erroneously represents suppuration as the most frequent termination; but the following passage from the " Leçons Orales " shows that Dupuytren did not regard suppuration as the most frequent termination: " Dans un grand nombre de cas, elles se terminent par résolution; dans quelques circonstances, par une abondante suppuration; quelquefois enfin elles sont le point de départ d'une inflammation qui s'étend à toute la surface du péritoine."‡ In the memoirs referred to

---

* Répertoire, tome iv. p. 86.   † Dupuytren, Leçons Orales, tome iii. p. 336.
‡ Ib. tome iii. p. 331.

there is no attempt to give the statistics of this disease ; yet, not-withstanding that severe and fatal cases are commonly chosen for report, we find three cases of resolution recorded by Dance and Husson, and seven by Menière.

But even the termination by suppuration, as in the case of abscess of the pelvis after parturition, is for the most part unat-tended with serious consequences.*   To the pelvic inflammation after parturition, the disease under consideration has manifestly a considerable analogy.   Yet active treatment in the early stage is plainly more essential than in the pelvic inflammation ; for the tendency to suppuration seems to be exactly proportioned in this disease to the neglect of free evacuations of blood, even by venesection, on the first onset of the inflammation.

In a case in which twenty-two days were allowed to elapse from the first attack of pain in the right iliac fossa, and fourteen days from the discovery of swelling in the same place, before treatment was resorted to, pus was evacuated by stool, and at the same time the tumour in the cœcal region disappeared, and the patient recovered.†

In another case, a young man, æt. twenty-six, was admitted into the Hotel Dieu, who had suffered for several days be-fore from dull pain, tension, and swelling in the right iliac fossa. There were colic pains at intervals, and the bowels were consti-pated ; the pulse was unaffected.   Six days thereafter, during which a few leeches were applied, and some inefficient refriger-ant and emollient treatment practised, acute pains arose, spread-ing over the abdomen ; next day there was great tenderness on pressure, and the pulse was frequent, small, and constricted. Venesection was resorted to, and numerous leeches were succes-sively applied.   In seven days from the occurrence of acute pain the symptoms remitted, and in five days more obscure fluctuation was discovered in the right iliac fossa.   On the following day a discharge of pus commenced from the rectum, which continued for six days, while the swelling by degrees subsided.   The patient was finally dismissed quite cured.‡

In this case the swelling in the right iliac fossa, which was present some days even before he was admitted into the Hotel Dieu, appears to have been overlooked at first, or held of trifling consequence ; and it is probable that a somewhat greater activity of treatment in the early stage would have prevented at once the peritonitis which, beyond question, arose six days after his reception, and the suppuration into which the original disease passed.

Three cases besides are reported by Husson and Dance, in which suppuration occurred, and yet recovery took place, the

---

* See Periscope of June Number, p. 156.
† Menière, Archives Gén. de Méd., tome xvii. p. 200.
‡ Husson et Dance, Répertoire, tome iv. p. 80.

pus being in every instance evacuated by the rectum ; and in
these three cases active treatment was either not practised at
all, or not till a late period of the disease.*   And in Menière's
memoir there are five cases of recovery reported after the dis-
charge of pus by stool, on nearly all of which the same observa-
tions as to the delay of proper treatment may be made.†   In
Dupuytren's " Leçons Orales" a similar case is recorded, in
which recovery took place after the evacuation of pus by stool ;
the patient was received into the Hotel Dieu on the fifteenth
day of his illness, and pus was observed in his stools on the day
of his reception ; leeches had been applied and venesection had
been once practised before he came to the hospital, but at what
period is not stated.

The same work contains a case cited from Ouvrard, which
shows that tumours of this kind should not be unadvisedly
opened.   A man of twenty-eight years of age was affected with
vomiting for six days, and then a phlegmonous swelling was
discovered in the region of the cœcum.   At the end of three
weeks pus was passed by stool.   Some swelling remained (as is
not uncommon), and the surgeon, wishing to evacuate its contents,
opened the abdomen without finding an abscess, and penetrated
into the cœcum.   The wound was closed.   The health quickly
declined, fever, looseness, and general emaciation followed.   At
the end of six months, after a journey in a rude carriage, an
abscess pointed below the cicatrice,. and soon opened spontane-
ously, discharging pus and feculent matter.   By means of ap-
propriate applications, compression, rest, and a strict regimen, a
cure was accomplished after the lapse of eight months.‡

It seems certain that the pus formed in perityphlitic inflam-
mation sometimes, though very rarely, penetrates through the
abdominal wall ; yet it is not to be inferred at once that every
discharge of pus through an external aperture in this region
arises from such an inflammation, since pus formed at a distance,
or what is termed a congestive abscess, may be evacuated in
this region.   No case of this mode of evacuation, however, is
reported in the two principal memoirs on this disease,—either in
that by Husson and Dance, which contains eight cases, or in
that by Menière, which contains thirteen cases.   The following
case, reported in the " Leçons Orales," seems to be unequivocally
an instance of the termination of perityphlitic inflammation in an
external opening, since pus was first discharged by stool.   A
young man of twenty-four years of age was treated at the Orleans
Hospital for a phlegmonous tumour in the right iliac region,
which he had at first neglected.   He passed pus by stool, and
his health was partially restored.   He then went to Paris, where

---

* Husson et Dance, Répertoire, tome iv. p. 80.
† Menière, Archives Générales, tome xvii. p. 200-207.   ‡ Ib., pp. 343, 344.

his complaint increased, the swelling enlarged, and abscesses opened in the right iliac region of a fistulous nature, through which pus and feculent matters were discharged. After a tedious illness of several months, accompanied with cough, diarrhœa, emaciation, and œdema of the lower extremities, and after being several times on the point of sinking, he recovered.*

In the cases which prove fatal, no evacuation of pus either by the rectum or by external opening for the most part takes place; but a copious deposit of pus is found on dissection almost uniformly, I think, as far as the reported cases show, along with marks of extension of the inflammation to the peritoneum. A case of this kind is reported by Menière. A young man, twenty-four years of age, subject to colic pains and purging, was received into the Hotel Dieu ten or twelve days after he had been attacked with a dull pain in the right iliac region. No treatment had been practised. The tumour in the right iliac region was not very prominent, but very painful on pressure. The constitutional symptoms were rather severe. Leeches were applied on three successive days with perceptible relief. On the evening of the fourth day violent colic pains came on, the stools were frequent, and there was great tenderness on pressure all over the abdomen. The fever was intense, the patient complained much, was excessively restless, and much changed in aspect. The swelling had extended, and its border was no longer discoverable. On this day venesection was practised, and forty leeches put on. The next day thirty leeches were applied, all without effect, and death took place on the 8th day. On dissection, general peritonitis was found involving the omentum and peritoneal coat of the small intestines. The cœcum was detached with the greatest ease from the iliac fossa. The cellular tissue lining that region was charged with a yellow almost concrete pus. This infiltration ascended to the level of the right kidney, and extended into the pelvis around the bladder and rectum, and traces of it were met with even on the left side. The cellular layer which unites the peritoneal coat of the intestines to their muscular coat was equally softened, and on seizing a convolution of the ileum, it was easy to strip off its outer coat.

The case before referred to, which I saw under Dr J. Duncan's care last winter, had a similar course, though, as an inspection of the body was not permitted, we are left to conjecture as to the exact state of the disease at the time of death. The patient was a female servant of twenty years of age. In the beginning of December 1843 she was seized with pretty severe pain in the right iliac region, attended with vomiting. Next day, a medical man, regarding the case as one of colic, pre-

---

* Leçons Orales, tome iv. pp. 342, 343.

Z

scribed assafœtida pills, which were taken without relief, and he did not return. On the fourth day Dr Duncan saw her. She then complained very much of pain in the right iliac fossa. The vomiting had ceased for the last twelve hours. Pressure over the seat of the pain gave considerable uneasiness, and a slight degree of fulness was perceptible. The bowels had not been moved from the morning of the first attack. Pulse 100, rather full; skin rather warm; tongue pretty clean.

As the case seemed to be one of inflammation around the cœcum, twenty-five ounces of blood were drawn from the arm, with the effect of affording some relief. Two grains of calomel with half a grain of opium were ordered to be taken every three hours. The next day the fulness was much more perceptible; a tumour in short could be distinctly defined in the region of the cœcum, and traced up into the lumbar region, while there was no general distention of the abdomen. " Some evacuation of the bowels from an enema. Pulse 100, of good strength; skin warm; restless and uneasy, but thinks the pain is not quite so severe." The use of calomel and opium was continued, and twenty-four leeches were ordered to the affected part, and fomentations to be kept up. " Leeches acted freely, but without affording relief." Next day there was some increase of the tumour, which was still well defined, though some distention of the abdomen had arisen. " Pulse, 112; tongue clean and moist; no vomiting; some scanty evacuation from injection." Twelve leeches and the continuation of the fomentations, together with the calomel and opium, were ordered. The next day the tumour was still further enlarged, and, notwithstanding an increased distention of the abdomen, could still be distinctly traced out. From this time the patient gradually got worse and worse. The tumour appeared to increase, but its definition was lost in the general distention of the abdomen, which progressively augmented. The vomiting returned. The bowels became obstinately obstructed, the pulse small and feeble, the tongue dry. The skin became covered with profuse perspiration, hiccup came on, and she died on the eleventh day from the commencement of the attack.

The signs of peritonitis in this case are by no means unequivocal. The obstinacy of the constipation points perhaps to the gut itself having become the seat of inflammation. It seems certain that inflammation affects the cœcum itself; yet how far that disease is liable to be combined with inflammation of the adjacent cellular tissue does not yet appear. The dissections hitherto published hardly throw sufficient light on this point. Albers, to whose memoir I have already referred, says that Puchelt* (to whom he ascribes the first notice of this disease),

---

* I have not seen Puchelt's memoir; Heidelb. Klinische Annalen, vol. viii., cah. 4 ; nor Posthuma's, De Intestini Cœci ejusque Processus Vermicularis Pathologia ; Groning. 1836.

as well as Posthuma and other pathologists, have confounded cases of perityphlitis with typhlitis or inflammation of the cœcum itself. But though Albers has given a very elaborate account of this disease, I have drawn little from him, and am less disposed to rely implicitly on his diagnostics, because the cases on which he founds are plainly less simple in their original character and course than those described by the French pathologists before cited. It is manifest that one of the greatest obstacles to the progress of pathology is the complication of the cases which most usually prove fatal, of the dissection of which almost exclusively minute accounts are obtained. For it is seldom in our power to unravel a series of morbid alterations, when any part of it is still unreduced to a general law, or to determine what changes existed before the last attack came on,— what are the immediate results of that attack,—what are strictly coincident complications;—and of these, what are casual or fortuitous,—what are consecutive, or arise connectively with the general tendency of the original disease. That Dr Duncan's case was a complicated case, it seems impossible to doubt; but on the nature of the complication it is less easy to pronounce, or whether the serious complications preceded the attack of perityphlitis or followed it; and whether fortuitously or connectively, in the absence of a dissection, it is impossible even to conjecture on probable grounds.

On the views of Albers, this case should perhaps be pronounced a normal case of perityphlitis, for it does not in any respect agree with the character which he lays down as that of typhlitis, while it does correspond in a great measure with the cases which he gives as illustrating the course of perityphlitis. And he plainly represents the disease as more apt to involve the peritoneum, and more disposed to terminate fatally, even when the pus has passed off by the rectum, than the French pathologists, on whose cases I have mainly relied in the foregoing account of perityphlitis.

There are but two cases reported in the memoir of Albers, and as both somewhat resemble the two cases just given, this is the proper place to refer to them. One of these is the case of a child eight years of age, in whom this disease terminated a highly acute attack, marked by alternate constipation and diarrhœa. In the history of the case nothing is said of the motion of the thigh being affected; yet after death the psoas was found red and softened, there was abundant suppuration adjacent to the cœcum, but no perforation of its coats; the peritonitis was confined to one patch close to the cœcum; the mucous membrane, however, of the cœcum was red and easily detached.*

The other case is that of a butler, twenty-nine years of age,

* Albers, p. 182.

who had been in good health till the period of the influenza in
1835, when he began to suffer from periodical pains of the
abdomen, and constipation. He was advised to try the effect of
cupping and of a cold bath, after which the pain became dimi-
nished in intensity, but more constant, and concentrated in the
right iliac region, while diarrhœa alternated with constipation.
This state of things continued five days, during which he was
engaged in his usual avocations. Then he became affected with
alternate chills and heat, and the pain in the right iliac region
grew very severe, and there were occasional colic pains. A
swelling now arose in the right iliac region, and soon after blood
and pus appeared in the stools. Death took place on the third
day after the aggravation of his complaints. On dissection, pus
was found behind the cœcum, extending upwards to the kidney,
and downwards to the brim of the pelvis. There was an open-
ing in the cœcum the size of a small coin, and the pus was still
trickling into the gut. The appendix vermiformis was hard and
thick, the right kidney was red and softened. The iliacus in-
ternus was indurated, and its cellular tissue was destroyed by
the pus. Both these cases are plainly far from simple.

The cases hitherto referred to illustrate the several less
favourable terminations of this disease, namely, suppuration
with discharge of pus by stool, the same with discharge by an
external aperture, and suppuration with superadded peritonitis,
or some other serious complication. The case which I am going
to report shows the most frequent course of the disease, when
it is uncomplicated, and proper treatment is early resorted to.
This case, of the particulars of which an abstract will suffice,
well illustrates the insidious mode in which this inflammation
makes its attack.

The patient was a medical man about forty years of age.
Towards the end of July 1840, being to all appearance in per-
fect health at the time, he awoke in the middle of the night
with severe griping pain, which continued for two or three
hours, and then passed off with a slight evacuation of the
bowels. He remained in bed for a part of the day without
uneasiness, and on getting up towards the afternoon felt nothing
but a sense of weariness, and of weight and slight tenderness
over the abdomen, as if the bowels were not sufficiently sup-
ported by the parietes. No new symptom arose for the next
two days; he took a moderate quantity of light food, and slept
at nights as usual. He believed he was recovering his usual
health and strength under rest and restricted diet. On the
evening of the third day, when getting into bed, he noticed a
slight pain in the fore-part of the right thigh, which in the
course of the night he found to commence in the right iliac
region. Next morning there was considerable pain and tender-
ness on pressure in that region; and on examination a distinct

hard circumscribed swelling, giving a dull sound on percussion, and tender to the touch, was discovered there. The bowels were free; the constitutional symptoms were not well marked, but the pulse was rather frequent, and unnaturally harsh and jarring. Twenty leeches were applied to the swelling with partial relief, and in the afternoon blood was drawn from the arm to sixteen ounces. At night, a pill of calomel and opium. Next day the symptoms had abated, but were not removed. Venesection was again practised to the same extent, and twenty leeches applied to the swelling; the pill was continued. Next day the disease seemed effectually got under; two days after, twenty leeches, on account of some stinging pains in the part, were again applied, with complete relief. There was no longer pain or tenderness in the part, but a slight hardness could still be felt on careful examination, which entirely disappeared after a trivial inunction with mercurial ointment kept up for a few days. The state of the bowels gave no trouble after the first morning; and ten days after the commencement of the attack, the patient walked out quite well. Once or twice in the course of the following winter some threatening of a return occurred, which disappeared under rest and light diet; and since that time he has enjoyed uninterrupted good health. Drs Henderson and Skae concurred in the treatment of this case. Dr Alison also saw the patient, but not till the characteristic marks of the disease had almost disappeared.

The pathological seat of the affection which we have been considering seems beyond doubt to be in the cellular tissue between the fascia of the iliacus internus and the coats of the coecum. And this peculiar seat explains why the pus, when produced, so uniformly passes into the coecum itself. The iliac fascia, though somewhat variable in character, is for the most part a strong fibrous membrane. Its extent and connexions form, so long as it is free from disease, an impenetrable barrier to the progress of pus outwards. And when we remember that about one-third part of the circumference of the coecum is uncovered by peritoneum, and that the uncovered part is in contact with loose cellular tissue interposed between the iliac fascia and itself, we shall no longer feel any difficulties in understanding the chief peculiarities of pericoecal inflammation. The pus is confined on every side by the close adherence of the peritoneum to the cavity which it lines. The alternative is, on the one hand, that pus so confined, almost in a sac, should penetrate through the posterior wall of the coecum, which is but making its way through a thin partition to a mucous open cavity, or, on the other, that it should penetrate through the substance of the iliac fascia, or ascend into the right meso-colon by separating its laminæ, or, detaching the peritoneum from the iliac fascia, where it adheres close to it, should make its way

into the pelvis. Cases may be instanced, I think, in which each of the consequences under the latter alternative has occurred, yet very rarely by comparison, and not probably till the inflammation unchecked had extended beyond its original seat and destroyed the substance of the fascia, or weakened the cohesion between the laminæ of the meso-colon, or that between the peritoneum and the subjacent substance, so that less resistance was offered to its progress between the laminæ of the meso-colon, and beneath the peritoneum in every direction, than through the coats of the cœcum.

EDINBURGH, 23 NELSON Street, 12*th June* 1844.

On the Occurrence of Sarcina Ventriculi along with Acetic, Lactic, and Carbonic Acids in Water-Brash. By GEORGE WILSON, M. D., Lecturer on Chemistry, Edinburgh.

THE object of the following communication is to direct the attention of pathologists to some curious phenomena accompanying certain forms of morbid digestion in the human subject. Of these, the most remarkable is the appearance of a microscopic cryptogamic plant (*Sarcina Ventriculi*), and of acetic, lactic, and carbonic acids, in a liquid ejected from the stomach.

The first case in which these were found occurred to Mr Goodsir, and was published by him in the Edinburgh Medical and Surgical Journal for April 1842.* Since that period a case has occurred in the practice of Mr Benjamin Bell of Edinburgh, who allowed Mr Goodsir and myself to examine the matter ejected by his patient, in which the same organism and acids were detected ; and Mr Busk of the Dreadnought hospital ship, Greenwich, has published the history of three cases, where the *sarcina* presented itself, but no analysis was made of the fluids in which it appeared.

Five cases of the sarcina having thus offered themselves in so short an interval, and without any particular search being made for it, it cannot be doubted that the development of this organism will be found no uncommon accompaniment of certain derangements of the digestive functions. With a view to direct the attention of medical men to the subject, I have drawn up the following account of the more important particulars of the cases already met with, along with some observations on the manner in which the chemical and microscopical phenomena are related to each other, and to the state of the system which attends their manifestation. I am indebted to Mr Goodsir for much information on the subject, and for many of the suggestions which appear in the following paper.

The first case occurred in the person of a gentleman aged nineteen, who had been suffering for four months' from what he believed to be waterbrash. He stated, " that it attacked him on awakening in the morning with a feeling of distention of the stomach ; that without any effort of

---

* History of a Case in which a Fluid periodically ejected from the Stomach contained Vegetable Organisms of an undescribed form, by John Goodsir ; with a Chemical Analysis of the Fluid, by George Wilson, M. D.

vomiting, a quantity of fluid, varying in volume from two-thirds to a whole washhand basinful, passed up from his stomach ; that after this he was quite relieved, and experienced no further inconvenience till the evening of the same day, when, without decided distention, sounds as of a fluid boiling or bubbling, and proceeding from the region of his stomach, were perceptible to himself, and to those around him ; that he slept well enough, but was generally attacked next morning." The fluid ejected by this patient " smelt like fermenting worts, with a faint acid odour. It appeared, after having stood for a few hours, moderately transparent, and of a light brown colour. It deposited in the bottom of the basin a quantity of a ropy matter of a granular appearance ; and on the surface was a mass of froth like the head of a pot of porter." .

On examining the fluid with the microscope, the sarcina was at once detected, and was found to present the following characters.* In every instance the organisms presented themselves in the form of square or slightly oblong transparent plates, of a pale yellow or brown colour, and varying in size from the 800th to the 1000th of an inch. They were made up of cells, the walls of which appeared rigid, and could be perceived passing from one flat surface to another as dissepiments. These dissepiments, as well as the transparent spaces, were from compression of contiguity recti-linear, and all the angles right angles ; but the bounding cells bulged somewhat irregularly on the edges of the organism by reason of the freedom from pressure. These circumstances gave the whole organism the appearance of a woolpack, or of a soft bundle bound with cord, crossing it four times at right angles, and at equal distances. From these very striking peculiarities of form, Mr Goodsir has proposed for it the generic name of SARCINA.†

On examining the ejected fluid, it was found to possess the following characters. It was thick and viscid ; on standing, it deposited a large quantity of ropy matter mixed with portions of undigested food, and when filtered through paper, had a pale brownish yellow colour, and was quite transparent. It still contained much animal matter in solution, becoming opaque and flocculent when boiled, and giving a very copious precipitate with infusion of galls. It also precipitated nitrate of silver densely, and when evaporated to dryness, and exposed to a full red heat in a platina crucible, left an ash containing much chloride of sodium. It reddened litmus powerfully, and effervesced sharply with alkaline carbonates. It continued strongly acid after being twice distilled, and did not precipitate nitrate of silver, but retained the sour smell, which could now be recognised as identical with that of vinegar. On neutralizing the twice distilled fluid with lime-water, and evaporating to dryness, a salt was obtained, which, on being decomposed in a tube-retort with sulphuric acid, yielded a volatile odorous acid, readily identified by several tests with the acetic.

It was found by several trials, that on an average, an ounce of the liquid neutralized 0·4 gr. of carbonate of potass ; a quart (32 oz.) would therefore neutralize 12·8 gr., which correspond to 9 gr. of the hydrated (crystallizable) acetic acid, $HO + C^4 H^3 O^3$. The liquid remaining in the retort continued to redden litmus powerfully, after all the acetic acid had been dis-

---

* The reader is referred to the Edinburgh Medical and Surgical Journal for April 1842 for a more minute description of the sarcina, and a detailed account of the chemical analysis of the liquid containing it.

† Sarcina, a pack or woolpack. The only species is named Sarcina Ventriculi.

tilled from it. This was traced in part to the presence of a small quantity
of free muriatic acid ; but it was chiefly owing to the existence in the liquid
of a considerable proportion of lactic acid.

The most remarkable feature of this case, in a chemical point of view, was
the large quantity of acetic acid found. Although we have no account of
the proportion of this acid discovered in the healthy gastric juice, or chyme,
by those who maintain its presence there, it is certain that the quantity must
be very small. Prout overlooked the presence of an organic acid altogether,
and Gmelin, the great advocate of its existence, found only traces of it. But
the quantity of liquid ejected at once by the patient often amounted to more
than two quarts, which would contain 18 grains of acetic acid. The liquid
otherwise was not particularly examined as to salts or animal matter.

Mr Bell's patient was a girl aged thirteen, who had suffered at intervals
for several years from derangement of the digestive organs. At the period
when her case came before us, she was stated by Mr Bell to be " subject
after her meals, particularly dinner, to enormous distention of the abdomen,
accompanied by a gurgling noise and fetid eructations."

From this state she was relieved by vomiting ; the matter ejected con-
sisting " of a thinnish moderately transparent fluid, with a thicker and more
tenacious portion like gruel at the bottom of the vessel. It was sometimes
covered on the surface by a mass of frothy matter, and generally there were
substances floating in it like undigested articles of food."

In this ejected matter Mr Goodsir found the sarcina in great abundance,
and not distinguishable in appearance from the individuals obtained from
his own patient.

Only one specimen of the liquid from Mr Bell's patient was procured for
chemical examination ; and circumstances over which I had no control
prevented this being so complete as could have been wished. In general
appearance it resembled the liquid ejected by Mr Goodsir's patient, but it
had a paler colour, was less viscid, and less frothy. It reddened litmus
powerfully, and precipitated nitrate of silver ; a property it owed to the
presence of chlorides, for no free hydrochloric acid could be detected. A
portion filtered and evaporated on the water-bath continued to redden
litmus after prolonged exposure to a temperature of 212°, owing to the
presence of an acid, believed, for reasons stated in the previous paper, to be
the lactic. Another portion, subjected to a double distillation, yielded a
colourless liquid, which was not troubled by nitrate of silver, but was found,
when examined by the method formerly described, to contain free acetic
acid. In chemical characters, therefore, it corresponded to the liquid from
the first patient.

An additional point, however, was ascertained, and that of some import-
ance. When the liquid from the first case was under examination, its
frothy appearance fully satisfied me that it contained a gas in solution,
which was likely from other circumstances to be carbonic acid. Experi-
ments accordingly were made, by warming the liquid in a flask furnished
with a bent tube dipping into lime-water ; and the latter was found to be
copiously precipitated. But no mention was made of these trials in the
former paper, because the method followed was objectionable ; since, though
carbonic acid was manifestly evolved in large quantity, it was quite possible
that it had resulted from the action of heat on a complex solution of organic
products, and had not pre-existed ready formed. With the liquid, how-
ever, from Mr Bell's case, I ascertained the presence of a dissolved gas, by
a method which seems in itself unexceptionable. Chemists have long been

aware of the fact, that one gas passed through a solution of another, will displace it, whatever their comparative solubilities be ; so that hydrogen or nitrogen, for example, will liberate carbonic acid, and dissolve in its place. Magnus has made a beautiful application of this law to the detection of carbonic acid in blood, and I followed his method in seeking for the same substance in the stomach liquid. A series of Wolfe's bottles was arranged so that hydrogen gas evolved from the usual materials in the first should pass in the second through a strong solution of caustic potass, to free it from any carbonic acid it might contain ; in the third, through lime-water, to certify its freedom from this gas ; in the fourth, through the stomach-liquid, to displace whatever gas it contained ; and in the fifth, through lime-water a second time, to show if the displaced gas were carbonic acid or contained it. On making the experiment, it was found that the current of gas which passed through the first lime-water without troubling it, on reaching the second, threw down an abundant precipitate of carbonate of lime.*

This experiment proves unequivocally the presence of free carbonic acid in the liquid ejected by the second patient ; and I feel certain that the carbonic acid was generated in the stomach, for the liquid was frothy at the moment of its discharge ; and Mr Bell speaks of the distention of the belly as " accompanied by a gurgling noise and fetid eructations," which doubtless proceeded from the evolution of this and other gases.

I have no hesitation in extending these conclusions to the first case ; for the liquid from Mr Goodsir's patient was more frothy than that from Mr Bell's, and it gave off carbonic acid when slightly raised in temperature. The patient also, in his account of his sensations, mentioned that " sounds as of a fluid boiling or bubbling, and proceeding from the region of his stomach, were perceptible to himself, and to those around him." It is quite possible that small quantities of other gases (carbureted or sulphureted hydrogen) may have accompanied the carbonic acid ; but it was impossible in the circumstances to ascertain this point.

The liquids, then, from both these patients, contained, besides undigested food and unexamined salts and animal matter, much acetic, lactic, and carbonic acid, and in one of the cases a small quantity of muriatic acid. A little carbonic acid has been found along with other gases in the stomachs of criminals executed soon after taking food ;† so that this gas may be included among the products of normal digestion. But the quantity found has always been small ; and in the few cases where it has been possible to

---

* The gases contained in a mineral water may be separated by simply heating it, and receiving them over mercury. But this method can seldom be applied to organic liquids, from the decomposing action of heat on their constituents ; and the air-pump has generally been employed to extract the elastic fluids dissolved in them. The conflicting nature, however, of the statements concerning the presence of carbonic acid in venous blood, before the publication of the researches of Magnus, shows the uncertainty attending the employment of this instrument, when the liquid under examination is viscid, and the quantity of gas in solution is not very great. Magnus states (Poggendorf's Annalen, bd. 40, § 583, quoted in Wagner's Physiology, p. 377), that " under the air-pump the gases of the blood do not begin to escape until the column of mercury has sunk under an inch in height," so that only instruments of good construction can be employed for experiments of this kind. The method by displacement, on the other hand, requires neither an expensive nor a very delicate apparatus, and may often afford valuable information concerning the gases in the secretions and circulating fluids of plants and animals.

† Liebig's Animal Chemistry.

watch the progress of digestion in living animals, no disengagement of gas has been observed,* nor is chyme at all frothy ; and in artificial digestion, whether performed with gastric juice from a living animal, or with an acidulated infusion of pepsine, no evolution of gas has been seen ;† so that it is quite certain that the carbonic acid which accompanied the sarcina in these cases was in quantity abnormal.

The same remark applies to the acetic and lactic acids. The names of various chemists were quoted in the published account of the first case, as representing them as normal constituents of the gastric juice or chyme. Their presence in these fluids is denied on the other hand by some of our latest observers, and many will hesitate to decide on this question, till a series of extended researches leave no doubt on the subject. I feel it unnecessary, however, to urge a decision on a point which will be decisively settled in a short period by the inquiries at present in progress. In the mean while, all will acknowledge that these acids were abnormal in *quantity*, and this admission will suffice for our present purpose.

The first case in which the sarcina was detected by Mr Busk, was that of a young man who had sustained rupture of the diaphragm. He had previously been in robust health, and survived the injury eight days, during which he rejected every thing he swallowed. Besides the ingesta, he vomited " a very large quantity of a peculiar looking brown fluid, . . amounting in the course of twenty-four hours to several pints." In this fluid the sarcina was found.

The second case was that of a young man, previously in robust health, who had sustained fracture of the spine and other injuries. " About twelve hours after the occurrence of the injury he vomited once, and once only, and the matters rejected consisted of a small quantity of brownish fluid mixed with food. The brown colour, as in the former case, was found to depend upon the presence of coloured flakes, composed for the greater part of the so-called sarcina."

" The third case was that of a boy, aged about fifteen, who was affected with disease of the hip-joint, under which he had long laboured, and by which he had been much reduced. A short time before his death he was seized with acute pleurisy, which was attended with frequent vomiting ; and in the matter thus rejected, and consisting of little more than mucus, were observed many brownish flakes, which were found to be composed principally of the sarcina."‡

In none of these cases was any analysis made as to the chemical character of the ejected matter, so that the following remarks must be considered in the mean while as applying solely to the first two cases.

Before attempting any explanation of the nature of this curious disease, and the connexion between the chemical phenomena and the development of the sarcina, it is necessary to notice that the ejected liquid must have consisted partly of secretions from the stomach, partly of products of digestion, *i. e.* of altered food. It is impossible to state accurately how much was contributed from each of these sources ; but, speaking generally, we may say that the bulk of the liquid was secreted by the stomach, while the acids were derived from the food, and the animal matter was supplied by both.

---

* Beaumont's Experiments and Observations on Gastric Juice.

† Müller and Schwann in Müller's Physiology, p. 592.

‡ For a particular description of these cases, and Mr Busk's views concerning the sarcina, see Microscopical Journal for 1842, p. 321.

In the particular account of the first case, reference was made to the similarity between the ejected matter and a fermenting liquid. It was impossible indeed not to be struck with its resemblance, not only in general characters, but even in specific products, to a vegetable juice undergoing the lactic fermentation, in which carbonic acid and other gases are produced along with lactic acid and a viscous gummy substance. The sarcina, too, might be considered as the analogue of the microscopic plants which are found to accompany the fermentation of infusion of malt and the juices of different fruits. For these reasons, and for others which are stated more fully in the succeeding pages, I was led from the first, along with Mr Goodsir, to regard this disease as resulting in great part from the food undergoing within the stomach a peculiar fermentation ; and on a particular consideration it appeared that three different views might be entertained concerning it.

1. The disease might be regarded as depending on a simple or spontaneous fermentation of the food, *i. e.* a fermentation resulting from one of its constituents acting as a ferment to certain of the others, and converting them into the acids described.

2. The sarcina might be considered as the *causa morbi*, and true excitant of the chemical changes in the food, according to the views of fermentation entertained by certain continental observers.

3. The stomach might be looked upon as secreting or furnishing the ferment, and the sarcina as an accompaniment only of the fermentation excited.

The last view appears in all respects the most probable ; a few words will suffice regarding the first two.

Several affections of the stomach might be referred to, as favouring the opinion that a spontaneous fermentation of the food had occurred in this disease. " It is well known," observes Liebig, " that in many graminivorous animals, when the digestive organs have been overloaded with fresh juicy vegetables, these substances undergo in the stomach the same decomposition as they would at the same temperature out of the body. They pass into fermentation and putrefaction, whereby so great a quantity of carbonic acid gas and of inflammable air is generated, that these organs are enormously distended, sometimes even to bursting." Affections of this kind are most common in ruminating quadrupeds, and occur in them in the first and second stomachs, before true digestion has begun. They are on this account not strictly comparable with derangements of digestion occurring in the single stomach of a non-ruminant animal. But in the human subject analogous cases occur, resulting from the drinking of half-fermented wines. The author already quoted refers to " the fatal accidents which so frequently occur in wine countries from the drinking of what is called feather-white wine. . . . . This poisonous wine is wine still in a state of fermentation, which is increased by the heat of the stomach," and the amount of carbonic acid is so great as to cause asphyxia by reaching the lungs.

These cases certainly show that the stomach has not the power of invariably arresting the fermentation of substances introduced into it ; nor even of preventing its development, where the food is prone to suffer this change. Nor does it seem improbable that some cases of morbid digestion may depend on an inaction or atony of the stomach, permitting the food to decompose or ferment spontaneously. But such a view is inapplicable to the cases before us, for the stomach was not passive, but morbidly active, as the quantity of

liquid it secreted showed ; and the rapidity with which the food (consisting of bread, potatoes, and meat) was converted into the several acids, was much too great to be explicable on the supposition of spontaneous fermenta- tion. For these reasons it seems necessary to seek for a ferment out of the food. The other hypotheses are framed to meet this necessity, and may be contended for on quite independent grounds.

The second hypothesis, which represents the sarcina as occasioning the fermentation, is at least interesting in relation to these cases, since it was the anticipation of some organism being present which led to its discovery. Schwann and Cagnard Latour first showed that the fermentation of infusions of malt by yeast, and the spontaneous fermentation of grape-juice and apple- juice into alcohol and carbonic acid, are attended by the development of a microscopic cryptogamic plant, to which the name of *Saccharomyces* or sugar fungus has been given. And some physiologists have represented these fungi as the true cause of such fermentations,—as nourished, in short, by the sugar which they excrete as alcohol and carbonic acid.[*]

But before such a conclusion was drawn, it should have been shown that sugar cannot be fermented into alcohol and carbonic acid without the deve- lopment of these fungi, which has not been done. It seems certain enough that the vinous fermentation of malt and of fruit juices is always accom- panied by the appearance of the saccharomyces. But these liquids contain azotised matter besides sugar, and it has not been shown that the fungi are more closely related to the latter than to the former. The well-known fact that the whole sugar is converted into alcohol and carbonic acid, while the fungi increase in size and numbers, seems enough to show that they must derive their nourishment from the non-saccharine constituents of the liquids in which they appear. Before the opposite conclusion is drawn, it should be shown that when a solution of pure grape or milk-sugar has the vinous fermentation induced in it by the addition of decomposing animal matter, these fungi appear, which hitherto has not been done. There is still room, therefore, for doubting if the saccharomyces are so much as constant con- comitants of the fermentation of pure sugar. And even if it could be shown that the appearance of these fungi during fermentation was invariable, it would remain highly improbable that they were more than concomitants. For the chemist can refer to many decompositions identical in nature with fermentation, where no organism of any kind appears ; and the chemical forces which suffice alone to effect great changes cannot be supposed to lose their efficacy because cryptogamic plants are developed, so that we should conceive them to be supplanted by certain inexplicable and improbable powers supposed to reside in these organisms. For these reasons, and for others which I need not detail, I discard this hypothesis as untenable, and refuse to the sarcina the office of decomposing the food in an abnormal way.

The third hypothesis represents the stomach as supplying the ferment or substance which decomposes the food into the acids found.

To make my views on this subject clear, I must premise a few observa- tions on the nature of healthy digestion. According to all recent re- searches, the performance of this function is dependent on the presence in the stomach of two different substances,—the one, free muriatic acid, the other, an animal matter, to which the name of *pepsine* has been given. An

* For fuller information on this subject, see Meyen's Report on the Progress of Vegetable Physiology for 1839, p. 37. Lehmann Taschenbuch der Chemie (1842), p. 279. Liebig's Chemistry applied to Agriculture, p. 380. Annalen der Phar- macie, band 29, s. 93 and 100.

infusion of this pepsine has no solvent action on hard albumen or other alimentary matters ; but its addition, even in minute quantity, confers this property on water acidulated with muriatic acid. The interest thus turns on the way in which the pepsine acts in conferring this power on the acidulated water; and on this point chemists are at issue. There are different shades of opinion, but, speaking generally, the theorists may be divided into two classes : 1st, Those who, along with Berzelius, represent the pepsine as acting *catalytically*, *i. e.* as determining the solution of the food by its mere contact with it, without taking from it or adding to it, or itself undergoing any change ; and, 2*d*, Those who agree with Liebig in representing the pepsine as an efficient cause of alteration in the food, solely because its own particles are in a state of decomposition or transformation.

Liebig does not use the term " pepsine," but I employ it, in explaining his views, for the sake of convenience. His own words are, " The clear gastric juice contains a substance in a state of transformation, by the contact of which with those constituents of the food which by themselves are insoluble in water, the latter acquire, in virtue of a new grouping of their atoms, the property of dissolving in that fluid." Pepsine is thus represented as bearing the same relation to the food whose digestion it effects, that yeast does to the sugar which it ferments ; the difference being, that in digestion the elements of the food assume a new arrangement, without separating into two or more groups, whereas in the vinous fermentation (*ex. gr.*) those of the sugar are broken up into alcohol and carbonic acid.

Without entering into any discussion of these opposite views of digestion, I adopt that of Liebig as the more probable and tangible of the two, and apply it to the cases before us in the following way :

The transforming action which pepsine exerts on the food is limited in the normal state to rendering its insoluble portions soluble in the gastric juice. But all the azotised bodies, such as diastase, yeast, albumen, caseine, which play the part of ferments, and among which pepsine is ranked, pass through several stages of decomposition whilst performing this function, and modify the non-azotised bodies (such as sugar) on which they act, in a different way, according to the state of decomposition in which they are. Thus, when fresh milk is exposed in open vessels, its caseine becomes altered by the action of the air, and ferments the sugar of milk which accompanies it ; the latter being transformed into alcohol and carbonic acid, into lactic acid, or into a mixture of these, according to the stage of decomposition which the caseine has reached. In the same way a piece of fresh bladder, which at first has no action on a solution of sugar, after exposure to the air, acquires the power, according to its state of decomposition, of resolving it into lactic acid, into mannite and mucilage, or into alcohol and carbonic acid.*

From these considerations it appears, that, within certain limits, if the mode of decomposition of the ferment alters, the mode of decomposition of the fermented body must alter also. The constant resolution of sugar into alcohol and carbonic acid, which constitutes the vinous fermentation, is the result or reflection of an equally constant though quite different decomposition in the ferment which occasions it. When the latter decomposes in another way, the former reflects the change by decomposing in a new way also, and the lactic fermentation (*ex. gr.*) replaces the vinous.

In the same way, if normal digestion, *i. e.* the resolution of the food into

---

* See a paper by Boutron and Fremy, in the Annales de Ch. et de Ph., tome xii.

certain soluble compounds, be the result of a constant decomposition of the pepsine in one way, it must be liable to be rendered abnormal, and the food to be resolved into quite different products, by the pepsine decomposing in a different way. I look upon the cases before us as presenting derangements of digestion of this kind. All the chemical phenomena they exhibited led me to look upon the stomach as the seat of a fermentation ; but whilst seeking for a ferment to account for this, I have been saved the necessity of assuming any absolutely new one by Liebig's view, which represents normal digestion itself as a fermentation, and pepsine as a ferment. I suppose, accordingly, that the carbonic, acetic, and lactic acids found in such abundance in the ejected liquid, were products of the fermentation or transformation of the food (probably of its non-azotised or saccharine and amylaceous portions) determined by its contact with the modified pepsine. As caseine, by a slight alteration in its condition determined by the action of the air, induces the lactic instead of the vinous fermentation in sugar, so we may believe that pepsine, in virtue of a similar change, determined in the same way, decomposes the food into these acids, instead of simply effecting its solution.

It is possible, perhaps, to carry our speculations farther. In the second case no free muriatic acid was found ; in the first, throughout the whole course of the disease, it was detected only in very small quantity. A diminution in the quantity of muriatic acid secreted by the stomach, may be the cause of the abnormal decomposition of the pepsine, and the corresponding abnormal decomposition of the food. I mention this here, not for the sake of pursuing the speculation, but to direct the attention of those who may meet with new cases of the sarcina and acid water-brash, to the question whether muriatic acid be present in the liquid or not, as an important datum for future conclusions.*

NOTICE.

A paper was prepared by Professor ALISON *and intended for this number. It has been unfortunately mislaid, but we hope to be able to insert it in our next.*—EDITORS.

PART II.—REVIEWS.

Lectures on the Theory and Practice of Midwifery. By ROBERT LEE, M.D., F.R.S. 8vo, pp. 553. Longman, Brown, Green, and Longmans, 1844.

CONSIDERING the unwearied industry with which the sayings and doings of Dr Robert Lee have been reported by the periodical press for years past, and the extravagant plaudits which have been so unsparingly bestowed on his exertions, it may be deemed a bold step of infant journalists, such as we are, to undertake the analysis of his prelections. As these discourses, however, have now been twice revised,—*first*, for circulation in the London Medical Gazette, and *secondly*, for republication in the volume before us, and, as this great master of the obstetric art informs us, at the " desire

* It would be a favour to Mr Goodsir and myself, if any practitioner meeting with a case of acid water-brash would send a specimen of the ejected matter for examination to my Laboratory, 24 Brown Square, Edinburgh.—G. W.

strongly expressed by many students and practitioners," it might be considered a dereliction of duty were we not to state our opinions respecting them.

Dr Lee is a man of ability ; but it is quite possible for a man of ability to write an indifferent book on midwifery.

The introductory lecture is in the discursive vein. The lecturer has followed the Horatian precept, "*in medias res,*" with a witness. He touches on many points which the student cannot possibly understand, his object being in the first instance to exhibit the manifold dangers to which women are subjected in child-bearing and labour. The evidence on this head is summed up with a statistical view of the mortality among pregnant women, and women during and after parturition in different countries and institutions. He then turns to a history of midwifery in ancient times among the Israelites and Greeks, and dwells on the attainments of Hippocrates in this line. We are amused with his zeal in behalf of the obstetric knowledge of Hippocrates, which it must be confessed was somewhat deficient, at least in precision ; for though Hippocrates, it appears, anticipated Ambrose Paré in the proposal to turn, yet his project of turning was in the wrong direction. We do not indeed observe at first sight from Dr Lee's account any thing of which Hipprocates was ignorant that accoucheurs know at present, except that he had no insight into the nerves of the uterus, and that he failed to discover that an olive, lying across the inside of the mouth of a jar, like a cross birth, had not the head, legs, or arms of a mature fœtus.

After this follow a few well-assorted and instructive paragraphs, quoted from Paré, regarding his proposal of turning, and bringing down the fœtus by the feet ; there are then a few brief remarks on the advancements and additions to obstetric science and art made by Guillemeau and Chamberlayne, after them the names of Smellie and Mauriceau are but barely mentioned ; but what has become of Rœderer, of the Steins, the Sieholds, the Osianders, the Naegeles, and the long time-honoured list of our own countrymen ?

The only other discovery which appears to Dr Lee at all to approximate in importance to that of the version of the fœtus, is his own so-called discovery of the uterine nerves. Even granting that Dr Lee's dissections display nerves, which is very much doubted by many who have inspected them, we think that matter of much greater utility and interest might have been given in an introductory lecture than an anatomical detail of parts which may turn out to be in a great measure fanciful. An excellent sentence concludes the lecture, but it too is a quotation from Sir Joshua Reynolds. We have now done with this discursive prologue, and proceed to examine the character and value of the instruction afforded to the pupils of St George's Hospital School. The description of the bones of the pelvis is excessively meagre and incomplete ; it is in some places so loosely worded as to lead to an erroneous idea of the parts, and in fact is but a bare anatomy of knobs and holes. We would lay part of this before our readers to bear out our statement, but other errors or omissions of greater importance claim our notice.

The inclination, muscles, and blood-vessels of the pelvis are thus briefly discussed :—" The plane of the brim is inclined downward and forward so as to form a *great angle* with the vertebral column" (p. 17) ; any thing between 90 and 180 degrees being quite immaterial to Dr Lee. "In the living body the psoæ muscles, with the iliac blood-vessels, extend along the sides of the brim of the pelvis, and *modify its form;*" the modification of

the form of the brim does not appear to be worth mentioning. We had thought that all circumstances tending to modify the form of the pelvis, however slightly, in part or in whole, were of the utmost importance in practice. The characteristics of the male and female pelvis are despatched in a line or two, as follows :—" The bones of the male pelvis are stronger and thicker than in the female, the cavity is less capacious, and the pubic arch is smaller," p. 18. In fact, we believe the description of the pelvis as given by Dr Lee to be the poorest and most meagre in print.

The next subject which Dr Lee considers is Disease of the Articulations and Bones of the Pelvis. Of the deformities caused by these he gives three varieties only—1st, That arising from arrest of development ; 2dly, From malacosteon ; and, 3dly, From rachitis ; the varieties arising from exostosis are only named, and that described by Naegele *das schräg verengte Becken,* or, as translated, " the obliquely contracted pelvis," is not once alluded to. In speaking of the first variety, Dr Lee says, " In some women the pelvis is not developed in the usual manner, and it remains small through life, although not distorted. Its condition is very different from what it is in childhood." The doctor appears to be unaware that there are two species of this variety : one of these he has described in a style which is confused, and we are confident unintelligible to the mere student ; but the second, where the pelvis remains precisely as it was in childhood, even to the cartilaginous junctions of the bones composing the os innominatum, he has entirely omitted.* The distinctive characters of the rachitic pelvis, and that deformed from malacosteon, are so jumbled together, that we are unable to extricate them from the maze of confusion. This, however, is sufficiently accounted for by the doctor stating afterwards, " that the changes produced by rickets do not differ essentially from those observed in malacosteon." Although this is a doctrine which is held by many, and although we see pelvises, in the museums of those who should know better, indiscriminately labelled " rachitis," or " malacosteon," as if a shower of labels had fallen on them accidentally, we can by no means assent to the opinion ; and we certainly agree with the statement that " it is not the difference in the disease that gives rise to the deformities characteristic of the two affections, but that it is the difference in the condition of the pelvis, at the periods at which it suffers from them ;"† for it is in infancy that the pelvis is attacked by rachitis, but it is after puberty that it suffers from malacosteon.

The third lecture treats of the " Anatomy of the Unimpregnated Uterus and its Appendages." It is not so full as we could wish, nor are the details given with that pointedness and preciseness which are so necessary in descriptive anatomy ; for example, the situation of the uterus is thus described :—" The uterus is situated within the pelvis, behind the bladder, before the rectum, below the small intestines, and above the vagina ;" we might almost as well have been told that the uterus is within the skin, above the heels, and below the eyes. In this lecture, also, *on the unimpregnated uterus,* the doctor is rather excursive, for he branches away to the question of the presence of a decidua in extra-uterine gestation, and as to whether phlegmasia dolens depends on inflammation of the pelvic veins or not.

The fourth lecture, comprising the " Physiology of the Unimpregnated Uterus and its Appendages," is good and interesting ; it contains much that is valuable in the shape of statistics of menstruation, and several important

---

* Naegele das schräg verengte Becken, s. 101.
† Campbell's System of Midwifery, p. 574.

dissections in support of the theory that this secretion is caused by hyperæmia of the uterus, consequent upon the escape of Graafian vesicles from the ovary. We shall not fatigue our readers with any discussion as to the priority of claim to this theory; for during the last month the pages of our journals have teemed with letters on this subject, from Dr Lee, his partisans, and their opponents. This much we know, that certain anatomical specimens, relating to this subject, were shown by Dr Girdwood to Dr Lee previous to Dr L.'s publication of his views on the matter.

The next lecture contains a good description of the corpus luteum, though rather too much of it is taken up with the question, as to whether the yellow matter is developed between the tunics of the Graafian vesicle or without the outer coat. Dr Lee here states, " that not unfrequently two corpora lutea are present in the ovaria, where there is only one ovum within the uterus." This taken to the letter is correct, but is extremely apt to lead to a false inference. If the doctor means that two corpora lutea may be found where one ovulum only has been impregnated, we must refuse our assent to his belief; for we have never seen or heard of any unequivocal instance of such an occurrence. Dr Montgomery, though he mentions one or two observations of this nature, details them in a manner so hesitating, that we are inclined to believe he attaches no credit to them; and we think Haller's statement " *numerus corporum luteorum est in ratione fœtuum*" is still uncontradicted. The lecturer continues: " I found a perfect corpus luteum in the ovary of a woman who died from inflammation of the uterus, soon after the expulsion of a mass of serous cysts, or hydatids, as they are termed." We are happy to have this statement from the doctor, in corroboration of the opinion that the so-called hydatids are merely a dropsical degeneration of the tunics of the ovum, and that their presence is an evidence of impregnation having been effected,—a fact which, had it been ascertained at that time, would have been of much value on the well-known trial of Mr Angus of Liverpool.

As in a work on midwifery, those portions which treat of practice are, or ought to be, the most valuable and highly finished, we must be held excused if we treat with some brevity of the remaining lectures on the anatomy and physiology of the uterus and ovum. Lectures 6th, 7th, and 8th, contain nothing sufficiently important to demand observation. The 9th lecture, though we cannot concur with all therein affirmed, is excellent, and, with other valuable matter, contains an unanswerable contradiction to the advocates of the " double night-cap decidua." As the preparation from which Dr Lee was enabled to demonstrate the incorrectness of their position is probably unique, we shall extract the description. It was a uterus in the second month of pregnancy, having the placenta attached chiefly over the cervix, taken from the body of a woman who had poisoned herself.

" If," says Dr L., " you examine this gravid uterus of two months, you will see the chorion and amnion enclosing the embryo and umbilical cord, and the placenta covered with its decidua adhering all round to the upper part of the neck of the uterus. You will also see clearly, that the decidua reflexa lies entirely above the villi of the chorion, on that side of the ovum where the placenta does not exist, and where the ovum is not attached to the uterus. In all the diagrams from Dr Hunter, Wagner, and other anatomists which you have seen, the placenta has invariably been represented as adhering to the fundus uteri, and the decidua reflexa has been situated near the cervix, and appearing as

if mechanically depressed or pushed down before the chorion or ovum. But in this preparation it is obvious that the decidua reflexa could not have been pushed down before the ovum, because it lies above or covers the ovum,—the ovum lies between the decidua reflexa and the cervix uteri, and as the ovum enlarged, the decidua reflexa must have been forced upward to the fundus uteri, which was lined with the decidua vera, instead of downward to the cervix. The decidual cavity is, you observe, at the fundus uteri, above the ovum, and both Fallopian tubes open into this cavity by palpable orifices. Instead of being covered with the uterine decidua, this membrane passes into them, and they are left completely pervious, so that no membrane existed which the ovum could mechanically push before it." P. 80.

These facts show that the decidua does not form a shut sac in the early months of pregnancy, but that the openings of the Fallopian tubes are permanent, and that therefore there exists no membrane which the ovum can push before it to form the decidua reflexa. The lecture concludes with the doctor's views of the uses of the decidual cavity; they appear to us to rest on but very feeble grounds, and to be in much need of confirmation from other observers.

The 10th lecture contains a tolerably good account of the growth of the uterus, its nerves and vessels, during gestation; the 11th is entirely the doctor's own, embracing solely his nerves and ganglia. The 12th, 13th, and 14th lectures, on the membranes of the ovum, cord, placenta, and foetal peculiarities, are good; the last, however, is rather meagre, as it attempts to include too much. We are surprised to find in the 15th lecture the signs of pregnancy handled with such brevity; many that ought to have been mentioned in a lecture are omitted, and the sign which in our estimation is second only to the sound of the foetal heart, viz., internal ballottement, is treated most superciliously. The doctor affirms also, that ballottement *per vaginam* is better ascertained with the female lying in the usual labour position than in the erect posture. Such a dictum we should expect from one who had never attempted a vaginal examination in the erect position; for the idea is totally opposed to reason, to common sense, and to fact. The 16th lecture contains a series of cases of concealed, feigned, and complicated pregnancy, possessing but little interest.

The 17th and 18th lectures are devoted to the consideration of extra-uterine gestation and abortion. The former of these subjects is miserably defective, for all that the lecturer communicates regarding it is contained in two pages and a half. Dr Lee, whether from ignorance of its literature, or that it would be derogating from his importance to consult contemporary authorities, traces its history, not from the time of Albucasis of the 11th century, but from that of Riolanus of 1650. He takes no notice of the excellent communication and ingenious views of Dezeimeris, nor of the elaborate memoir of Dr Campbell. Four lines contain all that is said of the symptoms; he is altogether silent regarding the diagnosis, and there is not a word on the subject of causes. Our author is hostile to the attempt of emancipating the foetus alive, without stating any reasons; and as we are equally opposed to this measure, we shall mention the basis on which our objections are founded. Gestation is a period, owing to the highly excited state of the nervous system, and the consequent facility with which general disturbance is produced, that is most unfavourable to surgical operations. Hence, of nine women who were operated on while the foetus was alive, or shortly after its life became extinct, not one survived; while

of forty on whom gastrotomy was performed, or the dilatation of an ulcerated opening in the parietes of the abdomen was practised some time subsequent to the death of the fœtus, thirty-six had so complete a recovery that many of them produced living children afterwards. The remainder of this lecture and the whole of the next are devoted to the consideration of the causes, symptoms, and treatment of abortion; and although there is nothing novel in the discourse, the lecturer nevertheless appears to considerable advantage, from the attention which he seems to have bestowed on the pathology of the ovum.

Among the averments in this lecture, we cannot overlook the following (p. 175), viz., "that abortion is *often* one of the first symptoms of malignant disease of the uterus, and women who have in the walls of the uterus a number of fibrous tumours embedded, never carry their children till the full time." The word "often" would appear to hold an elevated rank in the vocabulary of Dr Lee; but it seems to us to be too frequently employed by him incorrectly, as in the foregoing passages, though we hope, for charity's sake, without the usual signification. We positively deny that abortion is *often* one of the first symptoms of malignant disease of the uterus; and in support of our assertion we need merely refer to Dr Lever's very interesting statistics (Med. Chir. Trans., London, vol. xxii. p. 267), wherein we are informed, that of 113 women who had carcinoma uteri, forty per cent. only had miscarried; and as for ourselves, in no instance that fell under our observation, where there was malignant disease of the uterus during gestation, did either abortion or premature labour happen. And in regard to the second opinion advanced by Dr Lee, we regret to find that he has profited so little by his pathological industry as to be unaware that individuals with fibrous tumours embedded in the walls of the uterus may advance in their gestation to the natural term. Several instances are known to us where pregnancy was completed under these latter circumstances, but where the event was disastrous in consequence of uncontrollable hemorrhage.

We concur with the lecturer in thinking that the expression "habit of aborting," as applied to females who have repeatedly experienced this accident, is insufficient to account for the cause, which, independently of some morbid condition of the membranes, placenta, or fœtus, may often admit of a very different explanation. As local or uterine debility and consequent plethora are almost invariable results, even where miscarriage has only once happened, it seems reasonable in many cases to ascribe the accident to these conditions; and the rather, since it is well known that frequently, by temporarily suspending the procreative function, and thus affording an opportunity for the tone of the reproductive system to be improved, the disposition to abortion is removed.

Among the causes of abortion, syphilis and mercury are specified by our author; and he believes them both to act as specific poisons which destroy the vitality of the fœtus. The influence of the first of these must be familiar to men even of moderate practical information in midwifery, though its modus operandi must be pure conjecture; and in regard to the latter, though, in cases where there is a predisposition to abortion, mercury will occasion this accident with as much certainty as the former, yet the bare idea of its acting as a specific poison is such a perversion of known facts, that it is difficult to conceive how Dr Lee could have brought himself to advance so rash an opinion. We cannot for a moment suppose him to be ignorant that mercury is frequently exhibited, during pregnancy, to

females who have often previously aborted owing to the fœtus being contaminated by syphilis, and that instead of poisoning, it preserves the fœtus, which is born alive. We have known females illegitimately pregnant unmercifully salivated with the criminal intention of procuring abortion, but unsuccessfully, as the fœtus was born alive, and even appeared plump and vigorous. And we have known pregnant women severely salivated by mistake, upon the supposition of their having ovarian disease, but without any detriment whatever to the fœtus.

When the use of mercury is followed by abortion or premature labour, the accident will admit of a very different and quite as satisfactory an explanation,—it must be ascribed to local excitement and consequent injury to the utero-placental vessels. And, accordingly, Dr Lee himself informs us, and we happen to be familiar with the fact, that when mercury is exhibited to an undue extent during gestation, fatal hemorrhage may be the result. Calomel we have known, where it was taken in an over-dose, induce premature labour and fatal hemorrhage, by occasioning severe irritation of the bowels, propagated to the uterus, and followed by excitation of its fibres and premature detachment of the placenta.

Dr Lee terminates his enumeration of the causes of abortion by particularizing knots on the funis, and the latter being firmly entwined round the neck of the fœtus. Of several fœtuses, with knots on the umbilical cord, which we have seen, all were born alive except one, which had been destroyed by syphilis. And we have yet to learn how the fœtus before birth can be destroyed by the cord being firmly drawn round its neck, except by preventing the return of the blood from the brain, which is just barely possible ; and, accordingly, we have never yet seen a dead fœtus produced under such circumstances.

The 19th lecture is occupied with observations on the transmission to the fœtus in utero of scarlatina, rubeola, variola, and syphilis ; and on dropsy of the amnion. Of this last some very instructive cases are added in illustration ; but in his diagnostic marks Dr Lee is very meagre. We are not told that the fœtus is reached per vaginam with difficulty, and felt very indistinctly ; that its movements are communicated but obscurely to the parent ; that her abdomen enlarges with rapidity ; that her general health may be unaffected until an advanced stage of pregnancy ; and that there is then the most distressing dyspnœa.

The 20th lecture is an exceedingly rambling discourse. The teacher begins with varices of the pelvic limbs, advances to the uterus, whence, quite unexpectedly, he jumps to the head, and thereafter he wheels about to the thorax. Though, to speak phrenologically, Dr Lee's work affords evidence that some of his organs—for example that of Self-esteem—are highly developed, yet his region of Order must be a perfect blank. The subjects comprehended in this lecture are sadly jumbled together, and do not contain a single new idea. We pass on to the 21st lecture, which introduces us to the important subject of parturition. The first thing by which we are remarkably struck here is Dr Lee's great talent for condensation. Though we readily admit that comparisons are odious, yet we cannot help contrasting the amount of matter furnished by Dr Lee on natural labour with that which is contained in recent systematic works in our own language on the same subject. In the work of Dr Ramsbotham, jun., and some other systems published of late, we find at least three times as much information on natural labour as in Dr Lee's lecture. We admit that it is quite possible for one man to convey as much instruction in two lines as

another in six ; but, be this as it may, we have no hesitation in stating that Dr Lee's lecture on natural labour is exceedingly meagre ; for if there be any one division of parturition on which a teacher ought to dilate more than another, natural labour is that division, since the conduct of the practitioner in every other variety of parturition must be guided by the rules which ought to regulate his proceedings in the management of natural labour.

Although we have some idea where Dr Lee acquired a part of his elementary obstetric education, we presume that he is entirely indebted to the nice turn of his own mind for the following delicate precept—that the practitioner, in proceeding to make an examination, is to advance " *the fore-finger of the right hand to the anus, and along the perinæum to the vagina.*" If the lecturer's aim be originality, as far as our knowledge goes he has completely attained his object ; and we are very sure that no man possessing delicacy of feeling will attempt to deprive him of, nor indeed envy him, the merit of priority ; for of all the methods we have heard of, this is unquestionably the most offensive. To those of our brethren who are unacquainted with midwifery practice, it may seem of little moment, provided the parts be not exposed, in what manner the examination is conducted ; but to those who devote their attention to this department of the profession, it must be well known that indelicacy or maladroitness in the performance of this duty is not unfrequently the cause of the practitioner's dismissal. We shall not insult our readers by pointing out the method which should be pursued, as this will readily suggest itself to every man of sense.

The next passage in the same lecture, deserving the particular attention of our readers, is one containing sentiments which we certainly never expected to find inculcated by any one pretending to a scientific and practical knowledge of midwifery :—

" In no case is it necessary or proper at the commencement of the labour, before the membranes are ruptured, and the first stage completed, to endeavour to discover in what position the head of the child is placed relatively to the pelvis of the mother ; it is enough to know with absolute certainty that the head presents."—" Any attempt to determine in which of the numerous positions described by some authors the head is placed at the brim of the pelvis, would only endanger the rupture of the membranes, and disturb the regular order observed by nature in the process. I am greatly at a loss to discover what benefit could result from knowing, during the first stage of labour, provided you can touch the vertex with the point of the finger, in which of the six or eight positions of Bandelocque, and other foreign authors, the head is placed." P. 223.

Although we are unwilling to believe that Dr Lee, notwithstanding his love for originality, could have had any intention to mislead his pupils, we do not, however, hesitate to maintain, that the foregoing precepts are not only at variance with the experience of every practitioner of midwifery gifted with the power of observation, but certain, if acted on, to be productive, in many instances, of a great amount of suffering to the patient. It is so far necessary during the first stage, and if possible before the membranes have been ruptured, to decide the position of the head, that unless we have a correct knowledge of it, we should give an erroneous opinion regarding the manner in which the labour might terminate, its duration, and the degree of suffering which the patient might be compelled to endure ; on all of which points the parties concerned are not only most anxious to

know our opinion, but insist on being informed. Secondly, by discovering in the early part of the first stage an unfavourable position of the head, the practitioner, unless he confide in the mischievous principles inculcated by Dr Lee, will watch the case, that, when uterine dilatation is sufficiently far advanced, he may embrace an opportunity, before the membranes have burst, of endeavouring to rectify the position of the head, should this be necessary; for, after it has considerably advanced through the brim in a wrong position, and the liquor amnii has escaped, it will almost always be difficult, and often impossible, to effect the required change.

We admit that there are certain positions of the head which do not call for interference; but there are others in which frequently, if assistance be not afforded, the patient is obliged to submit to severe and protracted agony. Every practitioner of candour who has met with such cases will acknowledge that when the vertex is placed behind the pubes, or in contact with the sacrum, the progress, where the powers of the parent are relied on, owing to the unsuitable position of the head, is very slow, and the sufferings of the patient much aggravated; and every man of experience will also admit, that when the brow is towards either acetabulum, if the face should descend into the pelvic arch, as occasionally happens, that the transit of the head in far the greater number of instances is much retarded, and the patient's uneasy feelings greatly increased.

From the 22d to the 26th lecture inclusive, we have the management of cases of protraction and difficulty arising under the usual causes, such as rigidity of the os uteri, of the membranes of the ovum, and of the external parts; tumours, hard or soft, within the pelvis; premature ossification and preternatural growth of the cranium, hydrocephalus, malposition of the head, and shortness of the funis; and, blended with his observations regarding these varieties of labour, we have also the lecturer's sentiments respecting venesection and the exhibition of opium and ergot.

Although in the 21st lecture Dr Lee was at a loss to discover what benefit could result from our having in the first stage of labour an accurate knowledge of the position of the head, yet in his 24th discourse we have an indirect acknowledgment that such information is extremely valuable. By the position not having been recognised, either in consequence of the sentiments of Dr Lee being acted on, or from inexperience, and the malposition not being rectified when this could be easily accomplished, an unfavourable case is produced. Dr Lee, in speaking of such positions, is obliged to confess that, " besides the *great length of time* which may be required in moulding and expelling the head, there will also be a great distention of the external parts," &c.; in the second place, he remarks, that " if the labour is *much* protracted, and the natural powers be *insufficient for its expulsion*," &c.; and in the third place, he observes, that " no unpleasant consequence is produced except a swollen state of the child's face from *long-continued pressure*." But we shall immediately see that protraction of the patient's sufferings, exhaustion of her powers, and tumefaction of the fœtal structures, are not the only evils which will result from non-interference, but frequently also the death of the fœtus.

We are quite prepared to admit that in many cases of malposition, the face, during the advance of the head, turns in the direction of the sacrum without artificial interference, but whether so frequently as Rigby and the other disciples of the Heidelberg school have stated, is what we cannot positively affirm. But, admitting this to be the case, would a practitioner who had discovered malposition at such a stage of labour as would easily

permit the required change, be justified in leaving matters to nature, and the woman to be in agony from twelve to sixteen hours, when by very simple interference this could be prevented? We should like to ask Dr Collins, a gentleman in whose candour and experience we have implicit confidence, whether, if he had been present at the commencement of each of the twelve cases of labour with the face to the pubes referred to by Dr Lee, he would have left matters to nature? and if he would not, whether he conscientiously believes that the half of the children would have been still-born? Notwithstanding the opinions of Dr Lee and others of our brethren, we hold that to advocate non-interference, under the foregoing circumstances, would betray a degree of callous indifference to the sufferings of the sex, of which, after mature reflection, it would be difficult to find an example. When such pernicious principles are attempted to be inculcated, Dr Lee and his proselytes could scarcely feel any surprise should the London College of Physicians again declare to the Secretary of State for the Home Department, " that the most successful practice of midwifery requires no such laborious preliminary study " (as is necessary for the practice of medicine), " else discreet matrons and plain uneducated men in the country, who frequently arrive at great notoriety in this calling, would not acquire that credit which they often attain."

Dr Lee denies the influence of an oblique position of the os uteri in retarding the first stage of labour ; while he as firmly believes that shortness of the umbilical cord has this effect. Candour and practical experience, not mere assertion, will decide these points. Let such of our brethren as are sceptical regarding the influence of the first, merely introduce a finger within the os uteri when it is directed against the sacrum, as sometimes happens in first labours, and cautiously draw it into, and for a short time retain it in the centre of the brim, when the rapidity with which it will dilate must soon convince them of their error. Dr Lee's belief, that shortness of the umbilical cord will retard the expulsion of the fœtus, is scarcely worthy of comment, because not only the idea but *the very words* used by the lecturer are borrowed without acknowledgment from Dr Denman, one of the idols of the doctor's worship ; and because he unintentionally agrees with us in thinking that it cannot have this effect, by admitting that, when the funis is too short to permit the uninterrupted transit of the fœtus, the placenta will be detached or the funis itself ruptured, of which last Dr Rigby relates a case exactly in point.

Although we have thus far, as it was our duty to do, exposed the fallacies of some of Dr Lee's opinions, we do not hesitate, however, to admit that his sentiments and practice relative to many important points contained in the last five lectures are, to say the least, judicious, decisive, and such as were to be expected from a practitioner of industry and experience. We have noticed with satisfaction his strictures on the employment of venesection, opium, and ergot ; and we are glad that the reckless practice of incising the os uteri during labour, in cases of rigidity of that aperture, is not even mentioned by him, whence we infer that he disapproves of it.

The 27th, 28th, and 29th discourses may truly be denominated *multum in parvo,* and afford an additional instance of Dr Lee's aptitude for condensation ; for in these three lectures we have all his observations on the important subjects of the history, objects, and application of the forceps, embryotomy, Cæsarian section, and the induction of premature labour. In his introductory remarks on the application of forceps (lect. 28, p. 300), the lecturer informs us that he " gives the preference, above all others, to Dr Denman's short forceps *covered with leather*."—" But in truth I attach

comparatively little importance to the shape and dimensions of the forceps for use." Dr Lee could not have promulgated a more dangerous sentiment regarding this instrument than that its size is a matter of little consequence ; but fortunately we are saved the trouble of any lengthened comment on this head by additional light having dawned on the benighted intelligence of the lecturer in advancing with this subject ; for in the same discourse, at p. 303, we have not only a complete contradiction of the foregoing opinion, but what we are sure must be in accordance with the sentiments of every practitioner pretending to a knowledge of the use of forceps. "In order to disable young practitioners from running such risks (causing inflammation and laceration of the parts), and to free myself from the temptation of using too much force, *I have always used and recommended* the forceps so short in the handles that they cannot be used with such violence as will endanger the woman's life," &c.

The objection, and an insuperable one, to the employment of forceps of lengthened dimensions is the amount of power they confer on the operator, than which, in the hands of gentlemen entering on practice, there cannot be any thing more dangerous. This objection applies to all the continental forceps we have seen, even to that used by the distinguished professor at Heidelberg, though, from the eagerness with which he has so long applied himself to the improvement of a branch of the profession of which he is so distinguished an ornament, we had a right to expect that the defect in question would not have escaped his penetrating mind. For ourselves, we give the preference to the double-curved pair, which also is the variety most generally used on the Continent, being originally the suggestion of Levret ; and if the handles were lengthened by an inch, we do not know, of all the piracies which the dabbling manufacturers of forceps have produced, a better instrument than that delineated in the work of Dr Wallace Johnson, which on an impartial trial will be found, when properly applied, both more safe and efficient than the single-curved pair. By a practitioner so ignorant of the subject that he is unable to decide the precise position of the head, the single-curved is more easy of management, since in such hands we know for certain that forceps are occasionally introduced at random.

We concur entirely in the opinions of Dr Lee respecting the objects of forceps, and his salutary precautions regarding their use ; but, in his idolatry of Dr Denman, his sentiments in reference to these instruments are blended with notions so antiquated, and with directions for their application so utterly at variance with the experience of all competent practitioners, Dr Lee himself excepted, that, were we not satisfied of the contrary, we should certainly be inclined to infer that the author had much more experience in craniotomy than in the application of forceps. To forceps covered with leather, as recommended by Denman and preferred by Dr Lee, we decidedly object ; *first*, because this covering, by increasing the thickness of the blades of the instrument (and particularly so after their immersion in warm water), would render their introduction more difficult, or indeed impossible, in cases of limited free space, but in which, without the leather, they might be introduced with comparative ease, not only from less room being required, but from a polished steel instrument sliding more readily over the linings of the pelvis than a contrivance covered with a substance which would cause a greater amount of friction ; and, *secondly*, because we presume it will be admitted that it is quite possible, by means of an instrument covered with leather, to convey morbid secretions from one subject to another.

If Dr Lee acts in private in accordance with the precepts which he inculcates in his public lectures, we have no hesitation in pronouncing him to be one of the most indelicate and unfeeling practitioners we have read of for some time. This we think the following passage from his 28th lecture, p. 307, on the application of forceps, will fully substantiate :—"Take a blade of the forceps by the handle in your left hand, and *pass all the fingers of your right hand, in a conical form, covered with lard, slowly into the orifice of the vagina, and if it is a first child, and the parts are contracted, gently dilate them and press back the perinæum.* When this has been sufficiently effected, *pass the four fingers of the right hand forward into the vagina deeply, as far indeed as the root of the thumb,* between the head of the child and the front of the pelvis."—"I would recommend you *to pass all the fingers completely over the side of the head, so as to feel the ear,* and to determine positively to which side of the pelvis the occiput is directed." To what reflections the foregoing passage may give rise in the breasts of the competent part of our brethren, it is not for us to say ; but, for ourselves, we hesitate not to declare our belief, from abundant experience in the application of forceps, that not one woman in fifty would submit to the *unnecessary* and *unfeeling* practice recommended by Dr Lee ; and that the pelvis is rarely indeed of such capacity as to admit the adoption of the steps which he so confidently inculcates ; but we shall be charitable enough to suppose, that from his primeval origin nature intended Dr Lee for the profession of an accoucheur, and that, while she endowed him with the intellect of manhood, she purposely furnished him with the hands and fingers of a child.

As an appropriate introduction to our observations on the conduct of Dr Lee in performing embryulcia, we may here notice his directions for ascertaining the presence of deformities of the pelvis. "All the morbid conditions of the pelvis can be ascertained with sufficient precision during life by introducing the fore-finger of the right hand into the vagina, and passing it around the interior of the pelvis. If the point of the finger cannot touch the promontory of the sacrum, there is little or no distortion of the brim ; and by moving the finger from side to side and backward, it will readily be discovered if the tuberosities of the ischia are at the usual distance from each other, and if the direction of the sacrum and coccyx is altered." Lect. 2, p. 22. These directions for determining the various vitiated conditions of the pelvis are miserably defective, and an insult to the understanding of intelligent students. No sensible unprofessional reader even, not to mention competent practitioners, would for an instant suppose that so important a point as that by which the necessity of destroying a human being is to be determined, would be disposed of so summarily by a master in the art.

We were in hopes of being saved the necessity of commenting on the subject of embryotomy ; but here again we cannot conceal our dissatisfaction at the conduct of Dr Lee. In the course of twenty years he assisted at 127 cases of embryulcia, which amount of practice might be thought sufficient not only to qualify him for deciding with little hesitation on the necessity of the operation, and performing it with dexterity, but also for acting with such caution and tenderness as to secure, as far as human aid could accomplish, the safety of the parent. Far be it from us to insinuate even that the head was, in any one instance, perforated unnecessarily ; but we unhesitatingly state that, in some instances at least, it was not done with caution, and that consideration for the safety of the parent which ought to have been observed, and which may perhaps explain in some degree the

2 c

mortality that followed the operation, 23 of the 127 operated on having died after it.

In consulting Dr Lee's Clinical Midwifery, we find abundant evidence of the *fortiter in modo*. Thus, in case 66, " Great force required to extract ; case 76, great force required to drag the shoulders into the cavity of the pelvis ; case 78, great force was required to extract the head after being opened ; case 86, we were both thoroughly exhausted before the delivery was accomplished ; case 129, after much exertion, continued for nearly two hours, the head was at last extracted when completely torn to pieces ; case 135, great force was required to extract the head ; case 145, the head would not follow—I pulled strongly upon the neck—the perforator and crotchet were employed—the delivery was at last effected, but death took place five days after from uterine phlebitis ; case 146, the bones of the upper part of the head were all torn to pieces, and the fingers of my left hand much injured, before the delivery was effected ; case 150, the point of the crotchet was fixed on the base of the skull, and strong traction made for some time ; at last I succeeded in extracting the head with the bones all crushed together. After this severe and tedious operation she was left in a very exhausted state, and died the following day with vomiting and other symptoms of ruptured uterus. On examining the body after death, we found the muscular coat of the anterior part of the neck of the uterus lacerated. Case 151, though *I exerted my whole force* in dragging down the head, it would not pass." P. 35—76.

Had Dr Lee been contemporary with Philomenus, nothing more barbarous was to be expected than the management of some of the cases specified ; for the sole object of this last author, as would appear from the writings of Ætius, lib. xvi. c. 23, was to extract the fœtus in any way that this could be accomplished ; and if we are to judge from Dr Lee's proceedings, perforation and the most forcible traction constitute in his hands the basis of operative midwifery. Even Celsus, barbarous as the practice of midwifery was in his day, would appear to have acted with more caution than Dr Lee ; for he says, lib. vii. c. 29, "*Nam et summam prudentiam moderationemque desiderat, et maximum periculum affert.*" Every one who has been concerned in performing embryotomy must be aware that a considerable degree of traction must be exerted for the extraction of the fœtus, even where the confinement of the pelvis is not remarkable ; and therefore we do not blame Dr Lee so much for the efforts which he made, as for his having disregarded the most important precaution previously to attempting delivery —of reducing the size of the bones of the cranium, that during their extraction the certainty of injurious friction against the structures of the parent might be diminished. Neither does it appear, from the details of the cases related, that, with a view to the preservation of the maternal structures, evisceration of the thorax or abdomen had been practised. No one can peruse this section of Dr Lee's course without observing that, like the late Sir Fielding Ould and Dr Osborne, his grand aim is to show that the Cæsarian section may be dispensed with ; but although we are by no means friendly to that operation, and readily admit that by foreigners it was, and still is, resorted to where it would never be thought of by British practitioners, yet we are decidedly of opinion that no one can reflect on the violence which must have been inflicted on some of Dr Lee's patients, without being satisfied that they would have had fully as good a chance of recovery after the Cæsarian operation, and the additional advantage, in some of them at least, of one life being saved.

In concluding our strictures on cases requiring the crotchet, we cannot pass unnoticed a statement made by Dr Lee in the 141st and two succeeding deliveries*—that he introduced his hand and turned in a pelvis of which the distance, estimated during life, between the tuberosities of the ischia was only one and a half inch; but although this patient died subsequently under his management, the dimensions of her pelvis are not supplied, which, to say the least, must place the candour of Dr Lee in a peculiar position.

As was to be expected, the observations of Dr Lee on the Cæsarian section are not only meagre in the extreme, but almost devoid of useful information. Although we are as hostile to this expedient as he is, yet, as we are satisfied that practitioners may occasionally be called upon to perform it, his lectures ought to have embraced a proper detail of the steps of the operation, since it is quite possible that on some occasions an operator may have no other work to consult.

We entirely agree with the lecturer as to the safety of the induction of premature labour in as far as the parent is concerned, and that it ought to be resorted to in all cases at such a stage of pregnancy as may be required, according to the estimated amount of deformity in the living state, to prevent our endangering the maternal structures by embryulcia, or the patient being compelled to submit to the Cæsarian operation. But though puncturing the membranes, when done with caution, may be safe as regards the parent, yet we have always been of opinion, and our belief is confirmed by the results of some of Dr Lee's cases, that the early evacuation of the liquor amnii is often destructive to the fœtus, in consequence of the pressure to which it is thereafter more directly exposed from the contractions of the uterus. Wherefore, when our object is to preserve the fœtus, we have always preferred to the perforation the separation of the membranes from the uterus,—a practice which has invariably succeeded under our management to induce premature labour. In perusing the observations of Dr Lee on preternatural labours, it nowhere appears that he exhibited opium to relax the uterus previously to his undertaking the version of the fœtus after the escape of the liquor amnii. We can conceive no good reason for his dispensing with this invaluable agent under such circumstances, but the very reverse indeed ; and we think that if it had been exhibited, Dr Lee's cases of ruptured uterus would not have been so numerous.

The remaining lectures include the important subjects of uterine hemorrhage, convulsions, inversion of the uterus, rupture of this organ, inflammation of the organs of reproduction, phlegmasia dolens, mania, engorgement and inflammation of the mammæ, and ulceration of the nipples. In the perusal of these discourses there is little to find fault with, for pathological investigation appears to be the forte of Dr Lee,—as an obstetric practitioner he appears to little advantage. Of some recent opinions and practical improvements, however, whether from ignorance, jealousy of his contemporaries—one of his besetting sins—or because it would be derogatory to his reputation, he takes no notice.

In bringing to a conclusion our analysis of Dr Lee's labours, it is not necessary for us to say that we are exceedingly disappointed, for this will be read in almost every page of our observations. As a guide for students we cannot recommend these lectures, especially when those finished productions of Drs Blundell and Ramsbotham can be consulted, which the prosy prelections of Dr Lee resemble merely in name. We can aver that the dis-

---

* Clinical Midwifery, p. 73.

courses of Dr Lee do not contain any information of practical importance but what must be perfectly familiar to such of our brethren as possess a moderate knowledge of the literature of their profession ; and, therefore, that of all the productions in midwifery which have recently issued from the press, these lectures will be found, on perusal by competent judges, to be the least deserving of the honour of a place in a select medical library.

The Anatomy and Philosophy of Expression as connected with the Fine Arts. By Sir Charles Bell, K. H.   3d Edition, enlarged.   8vo., pp. 264. London.   1844.

This elegant contribution to philosophy and the fine arts, was the earliest and latest work of a distinguished anatomist, a man of taste and of genius. Although first published in 1806, it was originally composed during the period of his studies, " before the serious pursuits of life began." With the view of verifying the principles which it develops by the study of the great masters in painting and sculpture, the lamented author visited the Continent in 1840 ; on his return he recomposed the whole work for a new edition, and was engaged in its final revision for the press immediately before his death in 1842.

Nearly the entire work has been re-written. What formed the introductory essay of the former editions, forms the concluding one of this, which commences with a comparison of ancient and modern art, and a sketch of the influences under which the masters of the Italian school studied and composed their great works. What may be called the former work was more exclusively devoted to the relations of the subject to the art of painting ; the present embraces a fuller analysis of the sources of beauty and expression, and an examination of the theories of beauty in the human countenance, and of ideal beauty. What was contained in the former essays is mostly embodied in these, but extended and re-arranged ; and the whole work is enriched by illustrations derived from various sources, and particularly from observations made upon the great works of art examined by the author during his continental tour. The work has been edited, apparently with much taste and judgment, by Mr Shaw, surgeon to the Middlesex Hospital, by whom an Appendix has been added containing a review of Sir C. Bell's opinions on the nervous system ; the part of the last edition which related to that subject having been erased by the author before he had produced a new essay to supply its place.

In the present edition a considerable number of the sketches which illustrated the former ones are withheld. Although satisfied that this has been done with discrimination and taste, we can scarcely avoid regretting that they were not retained. Some of them were certainly rather fanciful and overdrawn, but they were valuable as the realization, in some degree, of the ideas and principles of the writer, and bore the marks of that genius which was almost always perceptible alike in his writings and his sketches. The best of the engravings of the former editions, however, are all retained, and to these have been added several new vignette illustrations of great beauty and spirit. Of these we were particularly struck with the head of a child in p. 17, and the bust of a man in p. 162 ;—they are accurate in drawing, and full of expression and beauty. If we were inclined to be

hypercritical, some faults in drawing might be pointed out, as, for instance, the outline of the forearm in the figure p. 210 ; but it would be unjustifiable to criticise severely the posthumous work of one who undoubtedly was no mean artist, and of whom our sad conviction is, that if he had survived to see his favourite work re-published, it would have appeared with many embellishments, now for ever lost to the public, selected from the exquisite sketches made by him during his visit to Italy.

The anatomy and philosophy of expression have relations to physiology, and to the duties of the practical physician, not less than to the fine arts. It is in this view, as well as because we claim a peculiar interest in all the writings of so distinguished a member of the medical profession, that we notice a work of this kind in a journal of medical science. The aim and design of the author are not only to enforce the study of anatomy on the artist by pointing out its advantage in drawing the human figure, but to investigate the sources of beauty and expression by an inquiry into their relation to the interior structure and functions of the body.

Following our late distinguished townsman, the author of the " Essays on the Nature and Principles of Taste," Sir Charles Bell traces the beauty of the human countenance to the association of ideas—to the capacity for expression, or the emotions or thoughts of which it is expressive.

" A face," he observes with much truth, " may be beautiful in sleep, and a statue without expression may be highly beautiful. On the other hand, expression may give charm to a face the most ordinary. Hence it appears, that our inquiry divides itself into the permanent form of the head and face, and the motion of the features, or expression.

" But it will be said there is expression in the sleeping figure or in the statue. Is it not that we see in these the capacity for expression—that our minds are active in imagining what may be the emotions of these features when awake or animated ? Thus, we speak of an expressive face before we have seen a movement, grave or cheerful, or any indication in the features of what prevails in the heart." *   *   *   " A countenance may be distinguished by being expressive of thought, that is, it may indicate the possession of the intellectual powers. It is manly, it is human ; and yet not a motion is seen to show what feeling or sentiment prevails. On the other hand, there may be a movement of the features, and the quality of thought, —affection, love, joy, sorrow, gratitude, or sympathy with suffering,—is immediately declared. A countenance which, in ordinary conditions, has nothing remarkable, may become beautiful in expression. It is expression which raises affection, which dwells pleasantly or painfully on the memory. When we look forward to the meeting with those we love, it is the illuminated face we hurry to meet ; and none who have lost a friend but must acknowledge that it is the evanescent expression, more than the permanent form, which is painfully dear to them." Pp. 20, 21.

In the examination of the relative proportions of the cranium and face, some curious facts are pointed out, not generally recognised by anatomists or artists. The idea is generally entertained, that in the different varieties of mankind the development of the cranium bears an inverse ratio to that of the face ; that as the capacity of the cranium diminishes, that of the face increases, and *vice versa ;* that the cranium grows as it were at the expense of the face. Sir Charles Bell here shows, by reference to experiment, that, on the contrary, the negro face, *e. g.*, is actually smaller than the European, considered in relation to the cranium (p. 38), and that the apparent difference and real distinction between them, besides the difference

of absolute size of the cranium, is in the greater development in the negro, not of the whole face, but of the parts immediately concerned in *mastication* alone.

The imperfection of the facial angle of Camper as a means of determining the relative dimensions of the cranium and face is acknowledged ; not so, perhaps, the idea that this angle, if increased to a right angle or an angle of 90°, fails to confer on the face the beauty or grandeur of the antique.

" Camper's position is this,—that as by the diminution of the cranium and the further inclination of the facial line the head is depressed in character to that of the negro ; so, by raising and throwing the skull upwards and forwards, until the facial line reaches the perpendicular, as in the preceding page (referring to a sketch of a very beautiful Mercury from the antique), the great object is attained of resemblance to the antique head. But his own figures contradict his conclusion ; for although he has thrown the head forward in them, even beyond the perpendicular of the facial line, yet, as he has preserved the features of common nature, we refuse to acknowledge their similarity to the beautiful forms of the antique marbles.   It is true that, by advancing the forehead, it is raised ; the face is shortened, and the eye brought to the centre of the head.   But with all this, there is much wanting,—that which measurement or a mere line will not show us."   Pp. 28, 29.

Our author accordingly traces the source of beauty in the antique statues to the delineation of those features which are associated in our minds with the possession of the nobler feelings and higher intellectual qualities of our nature.   As speech is one of the greatest marks of distinction between man and brutes, so the greater or less development and adaptation of those organs which are designed for the use of that faculty is peculiarly associated with manly beauty.   The adaptation of the lips for articulation and expression, of the nose and frontal sinuses for the manliness of the voice, and not their *size*, distinguish those organs from the purely *sensual* organs of the lower animals.   So of the eye and ear.

Discarding altogether the belief in the existence of such an abstraction as that of an ideal beauty, or of any notion of *divinity* other than can be derived from the contemplation of *humanity*, Sir Charles contends that the representations of divinity of the ancient sculptors owe their grandeur to the *exaggeration* of those features which are by us associated with the nobler qualities of mind ; and that the ideal beauty of the ancient masters in painting was arrived at by the delineation of those features which are associated with the pleasing emotions and purer virtues of the heart.

" With the view of attaining beauty, the artist is not to slight nature or to avoid it, but to study it deeply as the only source of improvement.   He must not only contemplate those beauties which we may suppose to stand before him, but consider where they differ from others less admirable.   How beautiful that smile ! how eloquent those lips !   Let him ask himself in what this consists.   Smiling and speech are characteristic of man, and are bestowed to express the affections of the heart and communicate thoughts. Give to the mouth the capacity for these.   Observe the forehead and the defined eyebrow ;—what is there in nature superior ?   Let him mark them, and then raise and throw forward the forehead, a feature especially human and elevating to the countenance.   Now he sees that depth is given to the eye ; that the shadows fall with bold relief ; the eyebrow acquires more freedom, stands in a finer arch, and is more expressive of agreeable emotions.

And thus he passes from point to point,—from one feature to another—the nose—the ear; exaggerating a little the outline of whatever indicates the higher and purer qualities, and avoiding what is low, or whatever is associated with the baser human passions or with the form of the brutes; and by insensible gradations, and long contemplation of what is highest and best, he acquires from nature that idea which is in his mind the perfection of form." Pp. 68, 69.

In Essay III. the author goes on to examine those sources of expression which cannot be explained on the idea of a direct influence of the mind upon the features; and here he develops and illustrates very beautifully his ideas regarding the muscles of respiration being in a peculiar manner the organs of expression. The mind acting upon the heart, and that upon the circulation through the lungs, produces all those uncontrollable signs of emotion which are the indications of human passion. " At the instant of our birth an association of muscles is formed, and at the same time put in operation, stamping a character of expression, which betrays the wants of the body in early infancy, and the sufferings of the mind in the after-period. The frame of the body, constituted for the support of the vital functions, becomes the instrument of expression; and an extensive class of passions, by influencing the heart,—by affecting that sensibility which governs the muscles of respiration, calls them into operation, so that they become an undeviating and sure sign of certain states or conditions of the mind. They are the organs of expression."

" Returning now to the contemplation of any of the stronger passions, we comprehend much which was before obscure. We see why that grief which strikes the heart should affect the regularity of breathing;—why the muscles of the throat should be affected with spasm;—why slight quivering motions pass from time to time over the face, the lips, and cheeks, and nostrils;—because these are the organs of respiration,—organs which have their muscles united to the sensibility of the heart, and moved under its influence. Now we comprehend how the passion of rage or terror binds and tightens the chest,—how the features are so singularly agitated by the indirect as well as by the direct influence of the passions,—how the words are cut,—how the voice sticks in the throat,—how the paralysed lips refuse the commands of the will, so that they are held in a mixed state of violence and weakness, which, more than any fixed expression, characterizes the influence of the passion." Pp. 94, 95.

The two following essays are devoted to a description of the muscles of the face in man, and a comparison of them with those of the lower animals. Admirable and accurate as the remarks generally are on the actions and uses of the various muscles of the face, we cannot refrain from remarking, that the descriptions of them are far from being sufficiently full and minute for a work specially devoted to this subject; nor are the wood-cuts which accompany the letter-press calculated to supply the defect by giving accurate delineations of the muscles. Nor have we ever been able to understand how the action of the oblique muscles of the eyeball has been made to contribute to the support of the so-called respiratory system of nerves. Neither the superior oblique muscle alone, which is supplied by the pathetic nerve, nor the two oblique acting conjointly, could ever produce those " upward glancings of the eye," which are referred to them, and to the influence of the respiratory nerves.

We are hardly prepared, either, to disinherit the lower animals of all

but instinctive emotions. Although less expressive than the "human face divine," we are strongly prejudiced with the belief that they have their feelings and emotions as well as ourselves, and that their faces possess, if we fully understood and studied the index, the means and capacity of expressing them.

Of the essays which follow, on the expression of the various passions, of expression in reference to the body, of the study of anatomy as necessary to design, and of the uses of anatomy to the painter, we cannot express ourselves in terms of too high commendation. They are characterized, with some faults of recapitulation and want of system, by great beauty and truthfulness ;—they display the nice discrimination and taste of the artist, the feeling and sympathies of the man of genius, and the reflection of the philosopher. Interesting as they must be, and truly valuable to the painter and sculptor who would make nature his study, a perusal of the observations cannot fail to interest the physiologist, and to benefit the physician. Such habits of observation and reflection as they are calculated to inspire would prove of infinite service in the detection and diagnosis of disease,—in the acquisition of that nicer tact—the *visus eruditus*—which is or ought to be the peculiar characteristic of the accomplished physician.

---

1. *Remarks on Schools of Instruction for Military and Naval Surgeons, in a Letter to the Right Hon. Sir Robert Peel.* By Sir George Ballingall, Regius Professor of Military Surgery in the University of Edinburgh. 1843.—2. *Catalogue of the Museum attached to the Class of Military Surgery in the University of Edinburgh.* 1844.

It requires but a very superficial acquaintance with the history of military campaigns and naval expeditions to discover how much their success depends on effective measures being adopted to preserve and restore the health of the forces employed. Nor can such measures be always alike ; they must be varied with the varying circumstances of warfare. It is true, the care of the health of armies and fleets ultimately rests on the great rules applicable to diseases and injuries in civil life. But there must be a great amount of practical knowledge, to be acquired only from the reports of those who have been in actual service, requisite for carrying those rules into effect with the best advantage in circumstances so different from those under which medicine is practised at home. To collect, arrange, and teach this description of knowledge is the peculiar object of the medicine of fleets and armies, generally known by the restricted name of Military Surgery.

There never was a country so situated as to have stronger claims on it for the encouragement of this branch of medical study than the United Kingdom. True, we enjoy the blessing of peace ; but we firmly believe we shall never retain that blessing otherwise than by being armed *cap-a-pie* for war. By well-appointed armies and fleets we obtained peace, and by nothing less can it be maintained. But our colonies and distant possessions afford nearly the same room for the exercise of fleet and army medicine, so to speak, as if we were engaged in actual war. Our soldiers and sailors are exposed on distant shores to unusual vicissitudes of temperature and climate,—to the burning sun and drenching rains of tropical countries,—to ever-varying epidemic influences,—to marsh effluvia,—to confinement on shipboard in tedious voyages ; and are therefore at all times nearly as liable to those scourges of the

camp—fever, ague, dysentery, cholera, &c.—as in war time. The hospital-service in the British army and navy may be as severe in time of peace as in time of war. The newly appointed hospital mate, trained merely in the ordinary schools, may know how to treat gun-shot wounds without any material error;—yet even here not less skilfully because he has listened to the instructions of one who has been familiarly conversant with such accidents, or whose collections of their effects, in the form of preparations, enable him to show the main points in which the treatment of some of them deviates from the rules applicable to the same kinds of injury otherwise produced;—but to all that concerns the peculiarities of an army surgeon's duties,—the direction of hospitals, the moral treatment of a class of men to whose habits, modes of thinking, and contrivances for deception and the like, he must be an utter stranger,—not knowing even where to seek for information, if his education has been confined to the walk in which those designed for practice at home study. No doubt the hospital mate soon gets into the routine of the service; but if that routine has sprung up under the mere force of circumstances constantly changing, what chance is there that it is as well founded as it might be, did it rest on the well-considered plans of men chosen for their experience and ability to superintend such instruction, and who would necessarily check each other's peculiarities and errors of judgment by a free intercommunication of knowledge? The division of labour has worked wonders in many departments of human knowledge; and there is no reason to doubt that its effects might be made as conspicuous in fleet and army medicine as in any other department.

These reflections have been suggested to us by the perusal of Sir G. Ballingall's letter, addressed to Sir R. Peel, on schools of instruction for military and naval surgeons. Sir George's object is to show the expediency of establishing a professorship of military surgery in the two other metropolitan cities as well as in Edinburgh. Our limits prevent us from extracting any part of this letter, which is the less necessary, because Sir G.'s views sufficiently appear in his reply to the strictures in the Medico-Chirurgical Review on his letter. This reply will be found stitched up with our present number at the end, and to it we beg to call the attention of our readers.

Among the other praiseworthy exertions of Sir George to promote the object of the chair which he fills, is the foundation of an illustrative museum. We have before us a catalogue of that museum recently printed, and an inspection of the museum itself has gratified us very much. The university has lately enabled Sir George to make a large addition to it. There is much in it to interest medical officers in the public service, bearing on various departments of their duties; but what gives a particular value to the museum is a collection of considerably upwards of a hundred preparations, made literally on the field of battle by Mr Rutherford Alcock during the service of the British Legion in Spain.

There are thirteen preparations showing the effect of musket balls, fragments of shells, &c., on the bones of the head and the dura mater; seven showing the effects of the same on the vertebræ and ribs; three on the bones of the pelvis; eleven on the bones and joints of the upper extremity; forty-five on those of the lower extremity; besides many others in illustration of the effects on the bones of amputation, exfoliation, exostosis, &c. Several preparations show the effects of gun-shot wounds on the brain and nerves, others the effects of the same on the thoracic and abdominal viscera, others on the blood-vessels. Altogether this part of the museum appears to us to be unique, and calculated to be of the greatest practical use. We

have heard of nothing to be compared to it elsewhere. We trust the medical officers of the army and navy will second Sir George's efforts, and add to this interesting collection as opportunities offer.

——————

On the Application of "Prismatic Reflection" to the Investigation of Diseases situated in the Open Cavities of the Body. By Dr Warden, F.R.C.S.E., Edinburgh.

Much difficulty has hitherto existed amongst the profession generally, in the obtaining of a satisfactory, simple, and generally useful method for aiding them in the investigation and diagnosis of the diseases affecting the deeper seated parts of the open cavities of the body ; and though the principle and means here proposed may not, in every instance, fully realize our expectations, yet the principle is by far the most simple and elegant of any that has heretofore been applied. The means recommended for effecting this purpose are based on the principle of illumination by means of totally reflecting prisms of flint glass.

These prisms are fitted on a speculum adapted to the cavity which it is desirable to explore, and the direct sun's rays, or even those from an unshaded side-light, falling upon one plane of the prism, become totally reflected by the other, and are transmitted along the centre of the speculum. Dr Warden particularly notices its application to the investigations of the morbid conditions of the auditory passage, and for which he has also devised an instrument. "It is formed," says he, "with the view of its being adapted not only to the different development of the organs of hearing in youth and age, but also so as to form a series of dilators, applicable to the removal of strictures, upon the same principle as regulates the treatment of the same disease in other situations."

"The instrument devised and represented in the accompanying diagram consists of a straight handle, *a a*, five inches in length, terminating in a ring, *b*, of half an inch internal diameter, the ring grooved in its interior as a screw. To this screw are adapted four canulæ or straight tubes, *c*, of four, three, two, and one lines calibre, and another, *d*, of a funnel or tapering shape, applicable for preliminary exploration, and removal of any accumulated cerumen obstructing the passage of the light, also for affording a proper field for the passage of instruments, and other topical manipulation. From the middle of the straight handle arises a curved branch, *e*, moveable in a pivot joint at *f*, toward either side of the handle. This branch forms a stalk on which a prism of flint glass, *g*, is perched erect, to the level of the opening of the affixed canula. The prism rests in a metallic socket, and is made to revolve on its own axis at the touch of the finger, or to remain fixed in any desired position, by the aid of a small clamping screw, *h*. The instrument is thus complete for use. The canula is to be introduced into the ear to be examined, the patient being seated, exposed to a good light. The surgeon placing himself conveniently opposite to the side of the patient, a face of the prism is turned towards the light, and it is made to revolve until the luminous spectrum is conveyed to the bottom of the canula, and to the surface sought to be observed. There is no difficulty in the adjustment of the position when the new relations of the light and of the object are familiarized by a little experience ; and when once this adjustment is made, the full and clear illumination of the object is at once ob-

PRISMATIC AURISCOPE.
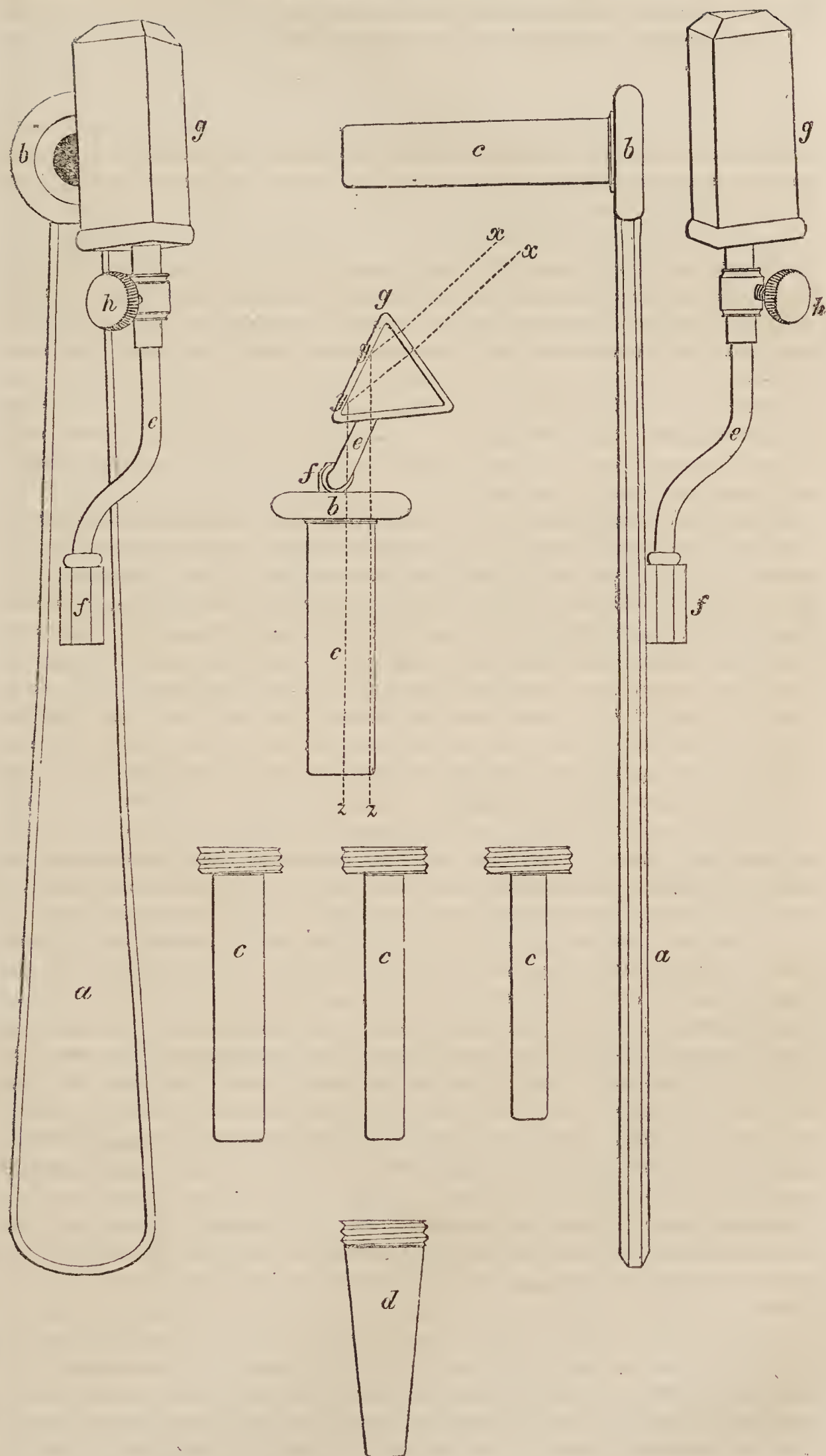
tained, and with a degree of brilliancy exactly proportioned to the quantity of light employed in the particular observation.

" The principle or theory consists in *total reflection :* the light is received by one side of the prism, is reflected from the second side, and emerges by the third side to the object illuminated, as represented by the dotted lines *x y z*, and whence its view is revealed to the eye. The illumination is not preternatural or dazzling, such as would alter the real features of disease, but natural, and such as the eye is familiar with. The advantage of this flat natural light will be fully appreciated by professional eyes ; and I am persuaded, from ample experiment, that any means of concentrating light by lenses, or converging mirrors substituted for the prism, would not improve the serviceableness of the instrument exhibited, although by their subsidiary employment they may be made to contribute to its efficiency, whenever, under extraordinary circumstances, more intense light is required.

" The method of illuminating diseased parts by the medium of the prism is relieved from the intricacies inseparable from the employment of a reflecting speculum, whose curve must be anew adapted by the manufacturer to the focal distance of the object to be viewed, otherwise it is indistinct and distorted, as in a false mirror. Neither is the method invented by me liable to the objections applicable to various ingenious contrivances for the same end, which we owe to distinguished members of the profession. By the convenient position of the light in prismatic illumination, it is not liable to be intercepted by the shadow of the observer, as is the case with any direct light proceeding from behind him,—a disadvantage we are not free from even where sunlight is employed ; and if a lamp and lens be placed between the eye and the object viewed, not only does the dazzling artificial medium alter the characteristic aspect of disease, but such apparatus, in order to guide any surgical procedure, must be kept strictly in such a position as necessarily to interfere with any convenient measures in the removal of foreign bodies, or other manual operations. By a construction of instrument suited to the situations of disease in the different cavities, increased facilities in surgical practice, I feel warranted in asserting, are largely attainable through the adoption of the method proposed by me.

" I may mention also, that I have satisfied myself by varied experiments that a totally reflecting prism placed in the angle of a bent canula, and illuminated by a second prism, in the manner already described, will afford a satisfactory view of objects whose situation precludes the possibility of direct observation—such as the opening of the Eustachian tube and of the glottis, the position of foreign bodies detained in the throat, &c. For the sake of illustration I may state, that by a simple arrangement, consisting of two tubes, each twelve inches long and one inch diameter, embracing at their point of junction, at right angles to each other, a right-angled prism, I have been enabled to make inspection with the utmost accuracy of exquisitely coloured drawings of the morbid anatomy of the eye ; obtaining by the arrangement described a reflection of the image presented at the opposite extremity of such an instrument, and that in all the brilliancy of sunlight view.

" Furthermore, I find that a diseased surface can be accurately inspected at the extremity of a straight tube of twelve inches long and a quarter of an inch diameter ; and I indulge the hope, that within this range a more satisfactory treatment of highly seated strictures and diseases of the straight gut, as well as of diseases of the urinary organs, may be thereby attained.

That the latter expectation is not altogether visionary may be inferred from the fact, that the straight canula of the *brisepierre* of Baron Heurteloup has a diameter of one-third of an inch."—*Medical Gazette, May* 24, 1844.

Of the great utility of the application of the principle of prismatic reflection and illumination, as above proposed by Dr Warden, there can be no doubt; but as to the construction of the instrumental part of his auriscope, we do not think it calculated to be so generally useful. In cases of impaction in the meatus of any foreign substance, or when a polypoid growth is to be removed from the deeper portions of this tube, we do not think it could be used so advantageously as the common funnel-shaped and double-handled speculum of Kramer. If, therefore, the prism were to be mounted on this latter form of instrument, it would facilitate, more than at present enjoyed, the application and advantages either of natural or of artificial illumination. We consider that the most important advantage gained to the practitioner by the use of prismatic reflection arises from the facility with which the recesses of the open cavities of the body can be affected by means of a side light. This facility holds good in whatever cavity the illumination may be required; and thus the interposition of an artificial lamp between the eye of the examiner and the tube of the speculum being avoided, his eye will be less obscured, as also less dazzled, and, what is of still greater importance, one of his hands will be at liberty, so as to perform without the aid of an assistant any further examination or operation, if required. The profession are certainly deeply indebted to Dr Warden for his ingenious, simple, and elegant application.

ANALYTICAL CHEMISTRY.

As there are few of our professional readers, especially those in the country, who may not be called on at some time to execute chemical analyses, in cases of poisoning or the like, and as duties of this kind are certain to devolve on the medical officers of the army and navy when on distant stations, we recommend to their notice the following treatises :—

Elementary Instruction in Chemical Analysis, by Dr C. R. Fresenius, Chemical Assistant in the Laboratory of the University of Giessen. Edited by J. L. Bullock. London, 1843.

Elements of Chemical Analysis, Inorganic and Organic, by E. A. Parnell, Chemical Assistant in University College, London. 1842.

Traité Pratique d'Analyse Chimique, par Henri Rose, traduit de l'Allemand sur la quatrième édition, par A. J. L. Jourdan ; accompagné de Notes et Additions par E. Peligot. A Paris, 1843.—(A Practical Treatise on Chemical Analysis, by Henry Rose (of Berlin), translated from the fourth German edition, by A. J. L. Jourdan ; accompanied by Notes and Additions by E. Peligot. Paris, 1843.)

Dr Fresenius' work is an excellent treatise extensively employed in the practical chemistry schools of Germany, which we can recommend as of great value so far as it goes. It treats however solely of qualitative analysis, and the translation, though clear enough, is awkward and inelegant.

Mr Parnell's treatise is in all respects the one best suited to most readers, as it is not more expensive than the work of Fresenius, and includes quantitative as well as qualitative analysis. It is the most recent English work indeed on the former branch of the art, and contains the latest improvements up to the date of its publication.

Rose's book is much ampler than either of the others, and is the acknowledged text-book of Europe in inorganic analytical chemistry. We have an excellent English translation by Griffin of the first German edition of 1829, but it is now nearly out of print, and the original work has been increased by almost a third since the translation was made. The French translation being from the fourth German edition, and furnished with notes from the well known chemist Péligot, is much superior therefore to it.

Part III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

On the Structure, Relations, and Functions of the Nervous System.

[Continued from our last.]

" *Experiment 5.*—The cord alone was divided in the *fourteenth* and also the *twentieth* segment, and the intervening portion was destroyed by breaking it down with a needle. The animal exhibited in the anterior part of its body all the evidences of perfect volition. It moved actively along, turning itself back on either side repeatedly, as if to examine the anterior wounded portion, which it felt again and again with its antennæ, and when attempting to escape, frequently turned back as if in pain and aware of some hindrance to its movements, but it seemed perfectly unconscious of the existence of the posterior part of its body, behind the first incision. In those segments in which the cord was destroyed, the legs were motionless, while those of the posterior division, behind the second incision, were in constant but involuntary motion, the movements being similar to those of walking or running, uniformly continued, but without any consentaneous action with those of the anterior part, by which locomotion was performed, dragging the posterior divisions of the body after them. When the animal was held by the posterior segments, reflex actions were excited in the legs, and powerful contractions and gyrations of the whole animal were performed in those segments ; but these movements appeared to be entirely the result of reflex actions of the muscles, since exactly similar ones took place in the whole body in decapitated specimens. At the expiration of *twelve* hours the most perfectly voluntary acts were performed by the head and anterior division of the body, such as locomotion forwards or to either side, avoidance of any obstacle, touching it with the antennæ, which were in rapid action as in an uninjured animal, and attempting to reach and climb up an obstacle presented to it, but not in immediate contact with it. But reflex motions alone existed in the posterior division, in which the legs were very slowly moved, even when the animal was not progressing. Brisk actions were now more easily excited in them than at first, either by contact with the segments, by irritation of one or two of the legs themselves, or by a sudden current of

air.   By these means, when the animal was lying still, actions were imme-
diately excited in all the legs of the posterior part of the body anterior and
posterior to those which were irritated, and these actions were induced in
those of both sides of the body, but appeared to commence on the opposite
side, in the legs corresponding to those which were first irritated. In
eighteen hours the anterior part of the body was quite dead, no motions
whatever could be excited in it, either voluntary or reflex, but reflex actions
were then readily excited in the posterior, and also slightly so by mechanical
irritation, even at *twenty-four* hours."

" Other experiments were now made on the brain itself without detaching
the head of the animal from the body."

" *Experiment* 6.—The brain was completely divided longitudinally in the
centre by a fine pair of scissors.   All power of recognising objects was imme-
diately lost.   The antennæ were perfectly motionless, and the animal at
first moved directly forwards, as in the first .and second experiments,
dragging the antennæ along with it at the sides of the head.   It passed on
with the head, first segment elevated, and climbed over every slight obstacle,
and when opposed did not turn to the right or to the left, but passed forwards
with the legs moving rapidly as in the act of running.   At the expiration
of half an hour it had regained a little of the power in the left antenna, and
then constantly moved in a circle to the left side.   When either antenna
was pinched, a sudden convulsive movement was induced in the whole body,
but the antennæ were not retracted when touched, as they always are by
the uninjured animal.   At the expiration of an hour, slight motion was
regained in *both* antennæ, but the movements to the left side were still con-
tinued.   The brain was now entirely destroyed by a needle.   All power of
volition, which seemed to have been partly restored, as well as the use of
the antennæ, were instantly lost, and the movements of the legs and body
were precisely similar to those already seen in the decapitated specimens.
Pinching the antennæ did not occasion the slightest convulsion of the body,
or reflected movements of the legs, but slight pressure on the segments
immediately induced them, and also violent contortions of the whole body,
especially when applied to the anterior segments.   In this specimen the re-
flected movements were excited at the expiration of eighteen hours, but
mostly so, at that time, at the posterior extremity of the body."

" *Experiment* 7.—The brain was divided in the middle, and one lateral half
with the antennal ganglion and optic nerve were removed.   Some of the
motions of the antenna of the uninjured side seemed to indicate the remains
of volition.   The animal coiled itself up and remained quiet as in health,
but the posterior legs of the body were in constant motion.   The power of
recognising objects appeared almost entirely destroyed.   When the remain-
ing lobe of the brain was irritated with the point of a needle, the body was
again extended and excited to slow progression forwards, exactly as in the
preceding experiments, but the power of moving was very feeble.   At the
expiration of two hours, the specimen having remained undisturbed in the
interval, slow progressive movements *in a circle* were induced by pressure
on the segments, and always in the direction of the *injured* side, the left in
this specimen."

" *Experiment* 8.—The lobe on the right side of the brain was removed,
and the results were precisely similar to those of experiments 6 and 7, and
the movements were to the *right*, the side injured in this specimen."

" *Experiment* 9.—The right eye and optic ganglion were both destroyed by
puncturing with a fine needle.   The antenna of that side of the head became

completely motionless, and perception of objects was destroyed ; but the animal still retained its voluntary powers, and was able to recognise objects on the left side, on which the antenna and eye were uninjured, and seemed to a great degree to retain their powers."

" *Experiment* 10.—Both antennæ were cut off close to the head, leaving the brain uninjured. All the powers of the animal continued perfectly voluntary, and it sought or avoided objects as usual, but by means of the palpi and vision, with not the slightest indication of reflex movements. When the point of a needle was passed in at the antennæ, the animal gave indications of great pain by its movements, but these were not reflex. When placed on the table it again sought objects, and carefully avoided falling over, by changing its course when it arrived at the edge. The brain was then destroyed through the insertion of the antennæ, and the movements immediately became reflex, and soon ceased, except when they were artificially re-excited."

" *Experiment* 11.—The eyes on both sides of the head were removed without injuring the brain or antennæ. Volition continued perfect, but the movements of the animal were slower, and all objects were explored with the antennæ ; and it avoided nothing except when in direct contact with it or when its presence had been ascertained by means of these organs. But immediately the needle was passed into the brain, all the motions became reflex, and precisely similar to those already detailed."

" These experiments seem to lead to the conclusion that the seat of volition is solely in the supra œsophageal ganglia of these animals, since all direction of purpose, all avoidance of danger, all control over the movements of the body, either of speed or change of direction, are lost when these are much injured or removed. Volition quickly ceases when they are severely wounded, and is greatly diminished even when one only is slightly affected. This latter fact is indicated by the loss or diminution of purpose, and by the gyratory movements of the body. The experiments seem also to show that sensation may remain after the injury or removal of one lobe of the brain, as was proved by the retraction of the antenna when slightly touched on the uninjured side of the head, and by the cleansing and excited act of drawing it constantly through the mandibles ; and further, that pain is felt when the cerebral lobes are injured, as when the needle was applied to them after the antennæ had been removed. They lead also to the conclusion, that all the phenomena which occur in the posterior parts of the body after the brain and cord have been separated are reflex or excited, and that these are most intense at the two extremities of the cord—the medulla oblongata, and the terminal ganglion ; and farther, that the reflex phenomena are always excited and do not occur spontaneously, and that their intensity is greater in proportion to the stimulus applied, and gradually diminishes until they entirely cease, or are re-excited, precisely as already shown by Dr Hall in the vertebrata."

" These experiments seem farther to show, that the reflected movements cease first in the anterior part of the cord and its ganglia, and that they are retained longest in the posterior ; that the movements are most powerful and continue longest when the cord is entire, the brain alone being separated from it ; and that they entirely cease sooner in proportion to the greater number of parts into which the cord is separated : further, also, that the reflex phenomena are less readily excited in the anterior part of the cord, while it is still in connexion with the brain, and that they cease entirely soon after the cessation of volition in that organ, as in those experiments in which only a very short portion of cord was removed with it from the body."

" Many of the phenomena are precisely similar to those which have here-tofore been observed in the crustacea. They agree in the circumstance that violent contractions of the segments and limbs, both anterior and pos-terior to a ganglion, are induced by irritation of that ganglion both when connected with the brain and when insulated from it, thus proving these movements in the latter instance to be reflex ; but there is as yet no direct proof that sensation does not also exist in these ganglia."

" The general results of these experiments tend to confirm the belief that the fibres now pointed out in the composition of the cord and ganglia, and which cannot be traced to the brain, are those by which these movements are executed independently of that organ ; and further also, that the reflex phenomena are most intense, most easily induced, and are of longest duration in those animals of low organization, in which the volume of brain bears the smallest proportion to that of the whole nervous system, in which also volition and sensation are of small amount, and which have the body formed of the greatest number of similar uniform parts or segments."

SURGERY.

ACADEMY OF SCIENCES, *March* 4, 1844.

" *Kératoplastic.*"

M. FELDMANN presented to the academy a second memoir on Kératoplastie (transplantation of the cornea), containing the results of twenty keratoplas-tic experiments performed in the laboratory of M. Flourens, at the Garden of Plants.

M. Feldmann announces, under the form of a general proposition, that

Kératoplastie is interesting in a physiological point of view, for it exhibits an example of animal engrafting (*greffe animale*), by the transplantation of the cornea.

It is also interesting in a practical point of view, for it has been twice performed on man.

In addition, keratoplastic experiments present a favourable opportunity, on the one hand, to our accustoming ourselves on the eyes of living beings to ocular operations in general ; and, on the other hand, they enable us to study, during the course of these experiments, in a very easy manner, a great number of the diseases of the eye, that is to say, inflammation in all its de-grees and in all its consequences. M. Feldmann then treats of the different questions connected with kératoplastie, viz. the transplantation, the trans-parency, the methods, the instruments, and the organic process (*travail*) of the reunion.

The following are the remarks of the author on the organic process of the reunion :—

1. The union of the foreign cornea with the eye the subject of the ope-ration takes place either by the first or by the second intention, or by these two methods at one and the same time.

It takes place by the first intention when the edges of the corneæ are in contact with one another, or when they are only separated from one another by a small space. In the second case a very well marked plastic exudation, furnished by the neighbouring parts, especially by the iris, takes place be-tween the corneal edges.

It takes place by the second intention when the interval between the corneal edges is considerable.

2. The circulation (*vascularisation*) is established, in the case of union by the first intention, in the new cornea, in the following manner :—One or several tolerably large vessels proceed from the bottom (*fond*) of the conjunctiva, and advance close to the edge of the foreign cornea ; having arrived there, these vessels propel the blood into the new cornea by forming in it new and visible vessels, or by filling the old vessels of the foreign cornea which had been hitherto invisible. It always happens that these vessels are at the commencement very minute, mere sanguineous threads (*des filets sanguins*), and they come off from their parent trunk in the form of rays, or in an arborescent manner. These vessels begin by appearing in the bottom (*fond*) of the corneal substance, as if the main trunk plunged itself at first into the deepest part of the tissue to deposit there the first drops of blood.

3. The transparency of the applied (new) cornea, which remains during the first days after the operation, disappears afterwards. The cornea changes its colour in proportion as the vascularity is developed in its tissue ; it finishes in the end by becoming more or less opaque.

4. The aqueous humour which had escaped during the operation is reproduced very quickly, in such a way as to raise up and cause to project the cornea, which had remained flaccid in front of the globe of the eye since a short time after the operation.

5. When a part of the cornea swims, so to speak, in the pus which is secreted by the exposed (*mises à nu*) neighbouring parts, and when at the same time the eyelids, especially their edges, exercise a slight abnormal friction on the cornea, it softens, and loses easily its conjunctiva. In that case there is no farther method by which this cornea, deprived of its conjunctiva and softened by the pus, can undergo the process of reunion.

6. The cornea really transparent, finishes by becoming smaller on account of the absorption of the half or more of its surface, and by becoming sometimes flat, at other times convex. The points of cicatrization are adherent to the iris.—*Gazette Médicale, Mars* 9, 1844.

MATERIA MEDICA AND DIETETICS.

On Skate-Liver Oil.

We abridge some passages of a memoir by Gobley (*Journal de Pharmacie*, Avril 1844) on the skate-liver oil.

1. The skate-liver oil is much less offensive to the sight, the taste, and the smell, than the cod-liver oil. The cod-liver oil is almost always turbid, brown coloured, and of a disgusting smell and taste ; while the skate-liver oil is quite transparent, is of a golden yellow colour, and has a weak fishy smell, and a taste by no means disagreeable.*

2. The skate-liver oil contains more iodine than the cod-liver oil.

3. That the skate-liver oil may be prepared by druggists, and thus that the doubts arising from the uncertainty of the source of the cod-liver oil of commerce may be avoided.

Further, M. Gobley thinks, that by his process skate-liver oil may be

---

* We have seen specimens of oil, declared to be cod-liver oil, from Zetland, which agree with this account of the skate-liver oil. Mr Pereira states the suggestion of a dealer, that the pale cod-liver oil of the German druggists must be the Southern whale-oil.—*Mat. Med.* vol. ii. p. 1386.

prepared at a cheaper rate than cod-liver oil. Skate-liver oil is commonly made by boiling the livers in water, decanting the oil which collects on the top, and clarifying it by rest and fresh decantations. M. Gobley's method is first to remove the membranes from the livers, to slice them thin, and then to heat them in a vessel (without water, as we interpret his directions), with constant stirring, until the contents boil; the boiling is kept up at a moderate heat until the oil swims on the surface quite detached from the clots formed by the rest of the substances; the whole is then thrown on a piece of flannel, and when the chief part of the oil has passed through, the remaining mass is pressed against the flannel with a spatula, and left to drop for twenty-four hours.

" Oil thus obtained," he says, " does not retain water : it is left to itself for some days to allow it to deposit a certain quantity of white concrete matter; when it ceases to deposit this matter, it is passed through filtering paper and laid by for use. The liver of the skate affords more than a fourth part of its weight of filtered oil."

When a drop of concentrated sulphuric acid is added to fifteen of oil prepared in this manner, a fine violet colour immediately appears, which after a time passes to red. When the oil is prepared by boiling the liver in water, the colour given by that acid is red from the first.

M. Gobley goes on to say, that the oil obtained by his process has been employed in the practice of Professor Trousseau, and that the effects manifested were at least equal to those afforded by the brown-coloured cod-liver oil. Our author thinks it likely that the cod and skate liver oils, besides iodine, contain phosphorus, which, according to him, would explain their miraculous effects in rachitis. He has hitherto failed to detect it; but he is not discouraged, and is resolved to persevere in the investigation.

PATHOLOGY AND PRACTICE OF MEDICINE.

Elephantiasis in Norway.

M. DANIELSSEN, physician to the St George Hospital, Bergen, has transmitted to the Academy of Sciences of Paris a memoir on the Elephantiasis of the Greeks, which has prevailed epidemically on the coast of Norway for half a century. This malady seems to rage with great intensity in Norway, for we find that out of 200,000 inhabitants, 1200 were attacked. In the great majority of dissections which were performed, M. D. found in the cutis vera, as well as in the subcutaneous cellular tissue, a hard granular yellowish substance, which appears to have destroyed the tissues in which it was seated. The same substance was also found in the coats of the subcutaneous veins, to such an extent as, in the basilic vein for instance, to equal the thickness of the finger. Similar infiltrations were found in the eyes, the larynx, the trachea, the bronchi, the pleura, the liver, the spleen, the womb, the intestines, but, strange to say, seldom or never in the lungs. The treatment is unsatisfactory : once developed, it usually is fatal.

[This disease, from the description given by M. D., appears to us to be Elephantiasis Arabum, and not Elephantiasis Græcorum, as he terms it. The Grecian elephantiasis, lepra taurica or Mal rouge de Cayenne, is in fact the leprosy of the middle ages, which we find first denominated by Lucretius " Est elephas morbus qui propter flumina Nili." Galen also fixes upon Alexandria as peculiarly the seat of its ravages (De Art. Curat. ad Glauconem, lib. ii.) ; but this is a disease distinct both in its nature and appear-

ance from the E. Arabum. Arabian elephantiasis never commences primarily
in the skin, which the Greek elephantiasis always does ; and the latter is now
seldom seen except in natives of the tropics, or those who have lived in
some intertropical country. The results found on dissection by M. D.
correspond with those usually observed in E. Arabum.

Mr Chevalier (Med. Chir. Trans., vol. xi.) found the cellular tissue in-
durated, and the papillæ of the skin enlarged, thickened, and projecting
from the surface. The epidermis is generally thickened and furrowed ;
the rete mucosum consists of several thickened layers; the cutis vera
often half an inch thick ; the cellular tissue the seat of a semi-gelatinous
effusion (Andral, Arch. Gén. de Méd. 1827 ; ib. 1823). The arteries sup-
plying the affected part have been found increased (Hendy) ; as was also
the tibial nerve (Naegle) ; and in one case the great sciatic was much en-
larged. We have not been able to find the deposition of the morbid matter
in internal organs mentioned by any previous author, and are inclined to
regard this as an interesting peculiarity in the cases observed by M. D.]

Case of Elephantiasis Cured by Guaiac and Iodine. By M. CAZENAVE.

THE disease was of eight years' standing ; the limb resembled a solid, hard,
fleshy column.

The patient was ordered a strong decoction of guaiac and mezereon ; the leg
was carefully bandaged from the toes, and every other day the bandages were
removed, and vapour douches applied to the surface, and an ointment of
hydriodate of potass rubbed in. She was put on generous diet and wine,
and confined to bed. The cure was effected in little more than three months.
This is not the first cure M. C. has met with by this plan, and several other
cases have been benefited. [Mr Burgess cured a case by the internal use
of iodide of iron, and the external application of the vapour of sulphur
and iodine.]

Cryptogami of the Hair constituting Herpes Tonsurans (Ringworm).

M. GRUBY communicated to the Academy of Sciences a memoir on the
above subject, of which the following is the analysis :—

Among the diseases of the scalp there is one which, by its contagious na-
ture and the obstinacy with which it resists treatment, is deserving of the
attention of the pathologist. It is the tinea tondens of M. Mahon, or the
herpes tonsurans of M. Cazenave.

Tinea tondens is principally a disease of the scalp, and is characterized by
the falling of the hair in circular patches, covered with small white scales,
and with slight inequalities analogous to what is vulgarly called chicken
flesh. On examining attentively, under the microscope, the fragments of
hair coming from one of these patches, it becomes evident that their entire
tissue is filled with cryptogami, and that the hairs are still covered with the
epidermic scales when their interior is already full of sporules. These
cryptogami originate in the interior of the root of the hair, under the form
of a group of round sporules. As the hair grows, the cryptogami which it
contains also grow, until it escapes from its follicle.

The cryptogami which constitute tinea tondens differ so much from those
which contitute phytoalopecia (porrigo decalvans) that these diseases cannot-
be confounded. Their seat, their development, and the relation which they
present with the tissue of the hairs, are quite distinct from what occurs in
the latter disease. The cryptogami of tinea tondens are only formed of

sporules and chaplets ; it is very seldom that we meet with elongated sporules imitating branches. The cryptogami of phytoalopecia, on the contrary, present numerous branches, curved, undulated, the sporules being placed on the side. In tinea tonsurans the sporules are large (diameter equal to 2 to 6-1000th of a millimetre). The sporules of the cryptogami of phytoalopecia, on the contrary, are very small ; their diameter is only 1 to 5-1000th of a millimetre. In tinea tonsurans the sporules fill the interior of the hairs, whilst their external surface is but slightly altered. On the contrary, the sporules of the *microsporon Oduini* are placed on the external surface of the hairs, and form quite a sheath around them. The cryptogami of tinea tonsurans originate and develop themselves in the root of the hairs. The microsporon Oduini, on the contrary, develop themselves on the external surface of the hairs, outside of the follicles. These characters are so invariable in tinea tonsurans that there is not a single diseased hair which does not present them.

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

Dr Oldham on Polypus Uteri and its Coexistence with Pregnancy.

Dr Oldham's communication on Polypi* is one of far greater importance than the author's fanciful and novel definition led us at first to consider it. Although we cannot but commend the industry displayed by Dr Oldham in examining the structure of these growths, yet, as our main object is to furnish our readers with valuable practical information, we shall merely enumerate, very briefly, his remarks regarding their situation and anatomical character. The *first variety* is described as a fibrous, pediculated tumour, of frequent occurrence, assuming all shapes and sizes, originating from all the regions of the uterus, but most frequently from its fundus, body, or sides ; sometimes covered by the deeper tissues of the organ, at other times merely by its mucous membrane ; their vascularity residing essentially in their uterine covering, the arteries being insignificant compared to the great size of the veins, which do not appear, from the result of injections, to enter into the growth, though the arteries seem to do so freely ; they are tardy in their descent or in acquiring a pedicle ; may destroy the patient by hemorrhage, or by a clear watery discharge so copious as to saturate two sheets in the course of twenty-four hours, as happened in a case described by the author. Dr O. informs us, that the uterus, not from its own weight, as was at one time supposed, but rather in consequence of its action to force down its contents, becomes partially inverted, which should be remembered in noosing the polypus, lest the ligature might be applied too near its radix and include the uterine tissue, which might, and we suspect often has, led to fatal results. The writer concurs in the views of the late M. Dupuytren, who maintained that a polypus which had lain long in the vagina had a tendency to undergo a cancerous degeneration, in some instances by a transformation of the growth into a cerebriform matter, and in others by the generation, as in this case, of fungoid patches, with softening of their structure. In support of these latter sentiments, Dr Oldham adds the particulars of a case which occurred about two years ago in St Bartholomew's Hospital. Here an excrescence, the size of an orange, was noosed and tightened without pain ; but during the night straining efforts supervened, and forced into the vagina a mass of the magnitude of a calf's heart, on which a ligature was also placed and tightened every twelve hours. On

---

* Guy's Hospital Reports, April 1844.

the second or third day after this step, profuse hemorrhage, owing to the rupture of a large vein, commenced, which ultimately required the bleeding vessel to be secured. Rapid decomposition now followed, attended by an effluvium so offensive as to require the removal of portions of the mass by the knife and the use of the chloride of lime. The remainder of the polypus was detached on the fourteenth day, and the patient had a complete recovery. The malignant conversion insisted on by the late M. Dupuytren, and acquiesced in by Dr Oldham, does not invariably happen, for we have seen two polypi of immense size, which had for several years been lodged in the vagina without undergoing the change referred to.

The *second variety* of polypus described, is what has been styled spongy, cellular, or fibro-cellular : it may grow from any part of the womb ; it is softer and more impressible at the commencement than the variety already described. Sometimes, instead of descending to the os uteri, it ascends towards the fundus of the organ. On examining its structure, void spaces or cells are displayed, which the writer considers as truncated and divided veins. The present differs also from the foregoing variety in as far as that the veins are freely distributed throughout its substance. When associated by pregnancy, it may acquire so large a size as to weigh several pounds. Several illustrative examples are added, to which we shall presently advert.

A *third variety* of polypus particularized, is one composed of a number of little cells, the size of the Graafian vesicle, with thin walls, filled with a pellucid fluid, supported by a fibrous tissue, about the size of a Brazil-nut, growing from the body of the terus, and furnished with a short pedicle.

A *fourth variety* is furnished by an enlargement of the crypts of the cervix uteri ; they are sometimes several in number, vascular, filled with a curdy fluid, covered with a cortical layer of fibrous tissue, and about the size of a walnut.

Dr Oldham describes a *fifth variety* not previously particularized. It arises from the cervix uteri, and from its interior exhibiting numerous large channels, he styles it *channelled polypus* of the cervix. The hemorrhage attendant on these growths is satisfactorily proved by the writer to arise, not from the uterine vessels, but from the veins of the excrescence, or of those of its investing mucous membrane.

In the latter part of this communication, which is highly interesting, the writer informs us that the presence of a polypus will not prevent pregnancy, a fact with which we presume the profession have long been familiar ; and in corroboration of which a number of most important cases are added. Here Dr Oldham suggests the very necessary precaution, before interfering with small polypi of the os and cervix, of ascertaining whether or not the patient be pregnant, a state which might not be suspected, owing to the presence of disease and the occasional occurrence of hemorrhage ; and an illustration is related exactly in point, where the application of a ligature to a small polypus, in a patient who did not consider herself pregnant, in consequence of a sanguineous effusion sometimes appearing, very speedily afterwards expelled an ovum. Of the cases by which this portion of the communication is illustrated, five have not previously been published ; and of these, with the diagnosis and practice, we shall now give a summary. In the *first* of these, that talented and active practitioner, Dr F. H. Ramsbotham, was consulted three weeks after delivery by Mr Moon : there were irregular discharges of blood, the uterus was tender, *as large as if six months pregnant*, its aperture could only receive one finger, by which a body resembling a coagulum or a second foetus was felt. Ergot in large quantity was exhibited, which caused much pain during the night. Next

day Mr Moon, being hurriedly called, feeling the os uteri opened and something protruding, he passed his hand without much trouble into the uterus by the side of a tumour which was furnished with a stem that was implanted into the fundus. This stem was firmly embraced; and under strong uterine action, the hand, with a fibro-cellular tumour the size of an ostrich-egg, were expelled together; and the patient recovered without an unfavourable symptom. The *second case* was communicated by Dr Radford of Manchester, who was consulted a fortnight after delivery. The patient, when he was called, was in *articulo mortis*, and died two or three hours afterwards. She had frequent sanguineous discharges, violent paroxysms of uterine pains, and straining efforts, and the uterus felt larger than it ought to be. On *dissection*, the uterus was found to contain a polypus about two inches in length, and varying from two inches to one and a half inch in circumference, growing from the fore part of the body. The *third case* Dr Radford saw the day after her delivery. She had hemorrhage, frequent small pulse, violent straining, and an enlarged state of the uterus. The hand was introduced into the uterus, a polypus the size of a pear noosed, the ligature daily tightened, and the excrescence detached on the eighth day. Dr Radford saw the *fourth case* six hours after delivery; found her with a profuse discharge, bearing-down pains, and unusual enlargement of the uterus. While preparing to apply a ligature, a severe uterine contraction supervened, which detached and forced into the vagina a growth equalling the size of a moderately large orange. To *case fifth* Dr Radford was called soon after delivery. The symptoms already particularized in the other cases were here also complained of. On examination per vaginam a tumour *the size of a foetal head of the seventh month* was felt above the os uteri. The placenta was still retained. The hand was introduced; the tumour, which had but a small stem, separated by torsion, and, with the placenta, removed; and the patient eventually recovered.

It follows that the diagnosis in the foregoing important cases consists in an unusual enlargement of the uterus, occasional discharges of blood from the vagina, uterine pains, severe straining, and, on examination per vaginam, a foreign body being felt above the os uteri. By these cases it is also established that the presence of a polypus, whether growing in the interior or from the os or cervix of the organ, will not prevent impregnation; that the hemorrhage, whether in the unimpregnated state or after parturition, arises, not from the uterine vessels, but from those of the excrescence; and that, with safety to the patient, the growth may be removed by torsion or ligature, and sometimes by the contractions of the uterus alone.

FORENSIC MEDICINE AND MEDICAL POLICE.

Iodine a Preservative against Variola.

DR SCHREIBER states, that he has found the administration of iodine useful in preventing the members of the family of a person labouring under small-pox from being infected with the same disease. The formula he used was as follows:—

R. Hydriod. potass. . . . gr. viij.
Tinct. iod. . . . g$^{tt.}$ xvi.
Aquæ font. . . . ℥ ij.

S. A teaspoonful morning and evening. Dr S. invites practitioners to a further investigation of the powers of iodine in this respect.—*Henke's Zeitschrift, No. IV., 1843.*

PART IV.—MEDICAL MEMORANDA.

How far is a Prisoner accused of Murder held guiltless provided the Deceased has a Surgical Operation performed upon him?

" Should an operation be unnecessarily and unskilfully performed, the responsibility of an aggressor would of course cease, if the death of a wounded party could be clearly ascribed to it. Thus, if in carelessly bleeding a wounded person, the brachial artery should be laid open, or if, in performing amputation, a large artery be imperfectly secured, so that the patient in either case die from hemorrhage, the prisoner is not responsible ; because it would be punishing him for an event depending on the unskilfulness of the medical practitioner. But supposing the bleeding or amputation to be performed with every proper care and skill, and yet, in the one case, phlebitis, and in the other tetanus, gangrene, or fever should destroy life, the prisoner will be differently situated.

" The practice of the law is strictly consistent with justice. If the operation be *absolutely* required for the treatment of a wound,—if it be performed with ordinary skill, and still death ensue as a direct or indirect consequence, the prisoner will be held responsible for the result. It is presumed in these cases, that if the patient were left to himself he would, in all probability, die from the effects of the wound. If, therefore, a surgeon, knowing that an operation would give a chance of saving life on such an occasion, did not perform it, it might be successfully contended in the defence, that the deceased had died, not from the wound, but from the incompetency and neglect of his medical attendant. Hence it follows, that if, during this very necessary treatment, unforeseen though not unusual causes cut short life, no exculpation should be admissible, if it went to attack the best directed efforts made for the preservation of life.

" By an operation being absolutely required, we are to understand that it is necessary to preserve life. Bleeding and cupping may be necessary in the treatment of a wounded person ; but unless it could be sworn that this treatment was required for the preservation of life, it is doubtful whether, in the event of death occurring from these simple operations, the assailant would be held responsible for the fatal result.

" In 1827, two persons were tried in Edinburgh for capitally assaulting another by throwing sulphuric acid over him. The death of the deceased was clearly due to phlebitis and concomitant fever, following the operation of venesection, which was considered necessary in the treatment of the case. It did not appear that this bleeding was absolutely necessary for the preservation of life, but merely for the prevention of severe ophthalmia. The charge of murder was therefore abandoned :—this question of responsibility for the fatal result being considered to involve too nice a point to ensure conviction."—Taylor.

ERRATUM IN LAST NUMBER.

Page 131, end of third paragraph, *for* aq. fontis, 3xii., *read* aq. fontis, ℥xii.

Part I.—ORIGINAL ARTICLES.

Observations on the Best Mode of Registering Deaths. Read at an Evening Meeting of the Royal College of Physicians, June 1843. By WILLIAM PULTENEY ALISON, M.D., F.R.S.E., Professor of the Practice of Medicine in the University of Edinburgh, and one of the Physicians in Ordinary to her Majesty for Scotland.

THE subject of Registration of Deaths with a view to facilitating statistical inquiries into the history, causes, and prevention of diseases, has been pretty fully considered and reported on by a committee of this college; and I think every one who has experienced the difficulty of extracting satisfactory information from the Registers now existing, must admit its importance. A decided opinion was expressed by that committee, that the method adopted by the medical advisers of the Registrar-General in England, and according to which the deaths there occurring are arranged and classified, although a great improvement on the old bills of mortality, is liable to very serious objections. The objections which we stated have been considered at some length by Mr Farr, in a paper contained in the Fourth Annual Report of the Registrar-General of England; and the members of this college may be somewhat disappointed at perceiving that, although expressing himself in complimentary terms towards us, he declines adopting any of our suggestions, and gives a decided opinion that his plan of registration is much superior to ours in almost every respect.

As I am by no means convinced by his reasoning, I wish to lay before the college the reasons which still lead me to think that the plan which we proposed is decidedly preferable, and that if a registration bill for Scotland shall be brought forward, we ought to endeavour to have the registration of deaths under it conducted according to our plan rather than according to that which is now adopted in England.

We must bear in mind that, in a scientific view of the subject, the main objects of such registrations are—

1st, To secure the greatest amount of authentic information as to the causes of death.

2dly, To separate distinctly that information which must necessarily be only general, from that which may be expected to be minute and precise ; and,

3dly, To facilitate the labours of future statistical inquirers who may wish to have various portions of this information thrown into the form of tables.

The objections which we stated to the English plan related, 1st, to the form of the schedule according to which the deaths are registered ; 2dly, to the nomenclature of diseases, to which all practitioners are requested to conform.

I. The essential difference between our schedule and theirs is, that we wish to have that part of the Register appropriated to the cause of deaths, divided into two columns—one to be filled up in every case without exception, but which is to contain, not the name of the disease (unless in the case of well-known epidemics) but only the seat of the disease, and its nature as acute or chronic ; the other column to give the name of the disease, always on medical authority, and only when well ascertained. This column will be filled, of course, in a much smaller number of cases, but will always give precise and accurate information, in conformity to printed directions to be put into the hands of all practitioners. We suggested, also, that each column should be subdivided into two,—the first stating what diseases are acute and what chronic ; the second stating what disease caused death, and what (if any) previously existed.

On the other hand, in the English registers only one column is assigned for the cause of death ; and Mr Farr thinks it preferable to have all the particulars stated in this single column. The following sketch shows the difference of the two plans :—

Plan recommended by the Edinburgh Committee.				*Improved English Plan.*
Duration and Seat of Disease.		Name of Disease.		
Acute.	*Chronic.*	*Causing Death.*	*Previously existing Disease, or cause.*	Cause of Death.
Bowels.	—	Dysentery.	—	Dysentery, 20 days.
—	Chest.	Consumption.	—	Consumption, 1 year.
Chest.	—	Pleurisy.	Epidem. fever.	Typhus, 17 days. *Pleurisy,* 2 days (p. mort.)

Our reasons for preferring the plurality of columns are these : 1st, We consider it quite certain that, as to a large proportion

of the deaths, there will be no report by a medical man, on which reliance can be placed ; the cases either having been seen by none, or seen so cursorily, or at so advanced a period, as to make it impossible for them to pronounce confidently on their exact nature. This, I think, all practitioners will admit to be true, even of many cases of which they could say, with a good deal of confidence, whether any and what remedies were likely to be of service ; and if so, it is obvious that to *require* or even to *invite* a declaration of the cause of death, in the same mode, in all cases whatever, is to make the statistical statements to be founded on those registers an almost certain source of fallacy, and of erroneous doctrine.

This is substantially admitted by Mr Farr himself, for he says that in England the names of diseases have often been returned, particularly as to cases not seen by medical men, *in a very unsatisfactory manner ;* but the remedy which he suggests is, to have all such cases inquired into *after death* by medical men, and then named ; which, as it appears to me, is not a procedure that can be adopted, at least in Scotland, with any prospect of more satisfactory results.

But, on the other hand, it is equally certain that there are various particulars which are easily ascertained, in regard to all cases without exception, and which of themselves, if ascertained uniformly and universally, will give results of great importance. These are, not only the age, sex, precise locality, and condition or mode of life of the deceased, but likewise the duration of his disease, as acute or chronic ; in the case of well-known epidemics, the name may be safely assigned, and in all cases of sporadic diseases, the part of the body in which the chief symptoms appeared.

The importance of having these particulars recorded as to *all* cases, combined with the impossibility of having a scientific statement of the cause of death in *many*, forms the difficulty which we propose to surmount by the two distinct and even subdivided columns.

It is no doubt possible to record all the particulars that we wish in a single column, and to have the names of diseases only assigned in that column when it can be done accurately, and afterwards to *pick out,* from the entries there, the cases which are accurately named, as distinguished from those of which we know only the seat and duration. But let us observe the inconveniences of this mode of proceeding.

1*st,* There is much greater trouble in throwing the information required into the form of tables. For example, if we wish to know how many acute and how many chronic diseases of the head are recorded in a given register and within a given time, how many of these have been registered in general terms only, and how many accurately named, we should have the trouble of seeking out and reflecting on the import of a great number of individual words, instead of merely summing up a column of figures.

2dly, By having only one column, in which all the particulars regarding the cause of death are to be stated, the attention of those making up the registers, whether medical men or not, is not fixed on the *different particulars* in regard to fatal disease which demand separate consideration, and there is a much greater chance of careless and fallacious registration.

3dly, No distinct line of demarcation is drawn between cases carefully observed and recorded by medical men, and cases the real nature of which may be quite unknown.

I admit that there is some force in the objection stated by Mr Farr to our division of acute and chronic diseases, according as they are of less or more than six weeks' duration ; viz. that you might as well divide all people into young and old, according as they are above or below the age of twenty. But still it appears to me, that the chief practical use which can be made of the entries of the duration of diseases, in Mr Farr's own column, will be to make up tables of diseases of different parts of the body and in different times and places, as *acute* or *chronic*, and I do not know a better line of distinction between acute and chronic diseases than that which we have stated. The formation of such tables will of course be extremely facilitated by having these separate columns ; and then, as the precise duration may be stated in each individual case in one or other of those columns, the more precise information which he considers essential may be obtained from our register equally as from his.

But the objections which he states to our having a column for the seat of disease, as distinguished from the name, proceed on an entire misapprehension. He says that nobody who is to use the registers will require to be informed that consumption is a disease of the lungs, and so forth ;—not observing that our reason for wishing the latter fact to be stated in all cases is, that we are sure it can be accurately stated in many, in which the disease cannot be named, or will be named incorrectly ; therefore, that by this column we gain a piece of authentic and important information, extending to a much larger number of cases than the named diseases. But we have the names given as distinctly as he has, in all those cases in which that information can be given on proper authority, and is therefore of real value.

That he has misapprehended the practical working of our plan appears distinctly from his criticism on it, at p. 215 (of Fourth Annual Report): " The Edinburgh Committee have assumed that distinct diseases, which cannot be distinguished in all cases and by all practitioners, should invariably be confounded under the same entry in the register. For instance, because it is probable that C and D would often confound croup, quinsy, and laryngitis, they would direct A and B and all well-informed practitioners to return the three diseases to the registers as ' acute disease of the windpipe.' What would be the consequence of a

recommendation of this kind? If the cases of croup, laryngitis, and quinsy are stated separately, it will be an easy matter to add them together; but if the three diseases be confounded systematically in all the registers, they can never afterwards be analyzed. According to Dr Alison's plan, all the physicians and surgeons of the country, whatever might be their skill in diagnosis, whatever be the progress of medical science, would be bound to assign the cause of death in general terms, instead of the precise terms by which diseases are generally designated."

Now, according to our plan, every physician and surgeon will be at liberty to exercise his skill in diagnosis to the utmost, because he will be *asked* to give a name to every case which he has seen (although a shorter and simpler nosology than that of Mr Farr will be recommended to him); but it can be no great trouble to him, *besides giving the name*, or when he is uncertain as to the precise name, to enter the disease in our first column as one of the head, chest, or abdomen; and by doing so he will enable any future inquirer easily to enter the case in two distinct lists, both equally authentic, the one containing certain particulars only, the other, a shorter list, containing more minute information.

It is to be observed, that in all Mr Farr's lists there are a number of cases recorded merely as *disease of the head, disease of the lungs, &c.*, which is an admission of our principle, that the seats of diseases can be stated in a number of cases where the names cannot be assigned. But these cases, from the deficiency of his plan, are not stated as acute or chronic; and their number is so small in comparison to those where the disease is named, as to show very distinctly, that on the names assigned to many of these cases little reliance can be placed as a scientific record.

I think I have shown that the plan of two columns with subdivisions,—although a little more troublesome to the framers of the schedules,—will be in fact less troublesome to the recorders of deaths, than Mr Farr's plan of crowding so many particulars into single columns, while it will give great facilities to future scientific inquirers.

There is a suggestion contained in Mr Chadwick's Report upon the sanitary condition of the labouring classes, which shows very distinctly the importance of having authentic records, not only of the diseases causing deaths, but of the circumstances attending and causing diseases, viz., that in addition or as superior to the medical officers in charge of districts (that is, of unions under the amended English poor-law) there should be a small number of superintendent medical officers charged with all inquiries affecting the public health, and that one of their duties should be the examination of the registers, to ascertain whether any particular diseases prevail at particular times in individual districts or classes of the community in an unusual degree, and if so, whether these can be traced to removable causes. It is obvious how much the labours of such men would be facilitated

by such a form of the registration of deaths as we recommend, with one simple addition, that our last column should comprise, as suggested above, not only any previously existing disease, but cause of disease.*

Of the facility of registers being kept in the way we propose, we have fortunately an example in the parish of South Leith, where, under the direction of Mr Lyon, the session-clerk, the register has been kept for some time past almost precisely on that plan.

II. On the list of diseases adopted in the English returns, as compared with the much shorter list recommended by the committee of this college, I do not think it necessary to enlarge, being quite content to leave it to the judgment of the profession, whether it be expedient, or likely to lead to useful results, to invite all practitioners to enter on the minute and sometimes ambiguous distinctions in giving the names of diseases which the English lists require. But there is an unfortunate difference of opinion between Mr Farr and our committee in regard to the great leading division (of the importance of which we are all agreed),— that of *plagues*, or epidemic and endemic diseases, occurring only within certain limits of time and space, and the *sporadic* diseases, of more uniform occurrence,—which demands a little consideration.

Mr Farr's principle is, that if any disease, or if cases which assume the characters of any disease, and are not easily distinguished from it, become epidemic at greater or less intervals of time,—even although it be only in what he calls unhealthy places and among the sickly classes,—that disease must be ranked among the plagues, and all cases of it, in all seasons, and however isolated they may appear, must be set down in the great division of epidemic and endemic diseases. Any other plan, he says, would lead to endless confusion.

Hence he sets down every year all cases of croup, of aphthæ, of dysentery, cholera and diarrhœa, and erysipelas, among the epidemic, endemic, and contagious diseases. He is strongly impressed indeed with the importance of distinguishing croup, which he thinks an epidemic disease, from laryngitis and from quinsy, which he ranks among the sporadic (which distinction I apprehend to be a difficult matter); but thinks that all the cases of cholera now occurring must be classed with malignant or Asiatic cholera, and that it is quite as unreasonable to distinguish them, as to separate mild from malignant scarlatina; whereas I believe that we in Edinburgh will generally maintain, not only that in a great majority of cases even fatal sporadic cholera is easily distinguished from the malignant, but that they are essentially and pathologically distinct diseases, and that the true malignant cholera was never seen in Scotland before 1831, and has not been seen since 1833.

In regard to several of the diseases in question—dysentery, erysipelas, croup, or even diarrhœa—we must allow that occasions do occur when they prevail epidemically or endemically, although

---

* Chadwick's Sanitary Report, p. 352.

not to be distinguished by their symptoms from the sporadic and often isolated cases, which may often be distinctly traced to cold, to repletion, or other causes of continual occurrence. But I cannot think it right,—on the contrary, I think it must tend to endless confusion,—to rank, on that account, *all* cases of these diseases among plagues or epidemics.

The reason of making a distinct class of epidemics, and laying stress on their distinction from other diseases in statistical inquiries, is, that the study of their history, causes, and means of prevention, is essentially distinct from the study of the same particulars in regard to the sporadic diseases; but this reason exists no longer, when we find that *all* cases, however isolated, of croup, aphthæ, diarrhœa, or cholera, are ranked among the epidemics, with smallpox and measles. Nobody can suppose that the means of prevention, applicable to ordinary cases of any of these diseases, have any analogy to the means by which we strive to arrest the extension of malignant cholera, or of plague, and with a view to which we study the histories of the diffusion of these diseases.

The only way, as it seems to me, of avoiding such difficulties, or even absurdities, is that which we formerly suggested. Let each of those diseases, when it occurs, as usual, in isolated cases, be entered among the sporadic diseases; but when any practitioner meets with such cases occurring so frequently, within narrow limits of time or space, as to indicate, in his opinion, the existence of a local and temporary cause, let him be requested to prefix the term epidemic, and those cases may then be ranked in the tables along with the epidemic diseases. And although there may occasionally be a difference of opinion as to whether the term epidemic is rightly applied, yet as in every such case the number of deaths attributed to such epidemic influence in any locality will appear, it will always be in the power of any one who uses the register to form a judgment on the point, whether the term is truly applicable.

I have the less difficulty in recommending this, as it is exactly what is done (and the principle of doing it therefore tacitly admitted) in the English tables as to two remarkable diseases. Mr Farr has bronchitis among the sporadic diseases, and influenza among the epidemics, I think quite correctly. But influenza may be very reasonably called an epidemic bronchitis, and certainly it is at least as difficult to distinguish it from many sporadic cases of catarrhus senilis, as to distinguish malignant cholera from the common cholera of this country, proceeding from an increased flow of bile.

Again, Mr Farr has among sporadic diseases what he calls gastro-enteritis, and explains as being inflammation of the mucous membrane of the bowels; but we all know that this inflammation occurs frequently and epidemically in connexion with typhoid fever; and that it is still disputed, whether there is not an epidemic typhoid fever, distinct from the true typhus,

and attended uniformly with this kind of inflammation. Such complex cases, if they have any distinctive name in the English tables, must, I presume, be called epidemic gastro-enteritis, as distinguished from the sporadic cases of that inflammation. This is another example where he must rank some cases of a disease as sporadic, and others, occurring in certain times and places, as epidemic. We have only to extend the practice, which I think he must adopt in regard to these two diseases (if he is to embody in his tables the information which they certainly ought to give in regard to them) to other cases, in order to have a complete justification of the mode of proceeding recommended by us.

For these reasons, I must be permitted to express the hope, that if we shall have the satisfaction of seeing a registration act introduced into Scotland, any influence which this college may possess will be exerted to secure, that the parts of the registers appropriated to the causes of death may be kept in the way that our committee has recommended, in preference to that which has been adopted in England.

NOTE.—*Form of Queries by which the Register is filled up in South Leith.*
      No. _____

Name of deceased   ...   . _____
(*State the Maiden as well as Married Name of Females.*)
Sex   ...   . _____
Condition, as Single or Married, or
   Widowed   ...   . _____

Age, last birth-day   ...   . _____
Relationship to, if not Head of Family,
   and Employment, if any   ...   ... _____

Head of Family and his Employment   _____

Exact place of ordinary residence   .. _____
   (*State the Street, No. of ditto or land.*)
Date of Death, *and place of it, if not
   the same as ordinary Residence*   ... _____

Date of Burial   ...   . _____

Place of Interment   ...   . _____

Medical Attendant, ... _____
Or if none, the Disease, if distinctly
   known, seat of it, and duration   ... _____

      (Signed)_____ *Undertaker.*

NOTE.—*It is requested that the Medical Attendant insert the Scientific name of the Disease.*
Seat of Disease   ...   . _____
Duration of do.   ...   . _____
Disease causing Death   ...   ... _____
Disease previously existing, if any   ... _____

      (Signed)_____ *Med. Att.*

On the Diagnosis and Treatment of Enlargement of the Heart, connected with Incompetency of the Aortic Valves. By WILLIAM HENDERSON, M. D., Professor of Medicine and General Pathology in the University of Edinburgh.

IN the first number of this journal I published a short paper on the employment and action of digitalis in certain diseases of the heart, and noticed incidentally the speculative grounds on which it appeared to me that the characteristic effect of digitalis on the frequency of the heart's action, though eminently serviceable in some diseases of the heart, was calculated to be injurious in a certain affection of the organ; and I signified my intention of adverting on a future occasion to other expedients, common in the ordinary treatment of organic diseases of the heart, which are improper in that of the particular disorder to which I allude. In reference to this disease, it was stated,— " Patency of the aortic opening, at that period when the ventricles are being filled, necessarily admits of regurgitation from the aorta, the effects of which are an overloading of the left ventricle, and gradually an enlargement of it—an enlargement so great ultimately, if the patient survive long, as to exceed, often to a great extent, that which occurs under any other circumstances. * * * Such being the tendency and issue of that overloaded condition of the organ which results from regurgitation from the aorta, it will be granted that whatever increases the amount of the regurgitation must accelerate the progress of the enlargement. That the less frequently the heart beats, the greater will be the opportunity for this regurgitation, is sufficiently obvious; and hence it is, that the prolonged action of digitalis cannot but be injurious when the aortic valves are not competent for their office." If it be not in consequence of the regurgitation that the ventricle becomes enlarged, of course it cannot be by rendering the regurgitation more considerable that digitalis can contribute to the progress of the enlargement; but if the regurgitation do operate in the manner supposed, it will not be difficult to admit, that the greater the amount of it, the more rapid will be the increase of the enlargement—that, in short, the effect will bear a proportion to the cause. I apprehend that no doubt can be entertained of the manner in which the enlargement is effected,—that it is actually due to the reflux of blood from the aorta, as a continued and habitual cause of over-distention of the ventricle; and I do not conceive it necessary to adduce any facts or arguments in support of the statement. At the same time, it is not maintained that the regurgitation acts, in producing the enlargement, merely in the way of mechanically distending the left ventricle; on the contrary, it is doubtless true that the increased exertion

2 G

on the part of the organ at every pulsation, rendered necessary by the greater amount of blood it has to expel and sustain, and the greater frequency with which it almost always pulsates in this disease, contribute to induce that increased nutrition which is characteristic of muscular tissue, the contractions of which are for a length of time more powerful and more frequent than usual.

Assuming, then, that the regurgitation is the cause of the enlargement of the heart, it becomes a matter of much practical importance to reflect on the consequences which may result from the use of means by which the regurgitation may be increased. I adverted in my former paper to the experience of Dr Corrigan in reference to digitalis, and remarked that my observation concurred with his as to the less satisfactory operation of that medicine in general, in cases of incompetency of the aortic valves, compared with its effects in most of the other diseases of the heart. The allusion which I made to the manner in which the digitalis may be understood to act so differently in the disease in question from what it does in the others, is quite in accordance with Dr Corrigan's explanation of the circumstance as expressed in the following quotation :—" If the action of the heart be rendered very slow, the pause after each contraction will be long, and consequently the regurgitation of blood must be considerable. Frequent action of the heart, on the contrary, makes the pause after each contraction short; and in proportion as the pauses are shortened the regurgitation must be lessened."* Again, " To retard in such circumstances the action of the heart would be to do an injury. In every case of this disease, in which digitalis has been administered, it has invariably aggravated the patient's sufferings. The oppression has become greater, the action of the heart more laboured ; the pulse intermittent, and very often dicrotic, from the heart being unable by a single contraction to empty itself; general congestion and dropsy, if present, have been increased, and in some of the instances *bronchitis* from congestion has been induced ; the respiration more laborious, and the strength so much sunk, that patients seemed almost moribund. From this state they only recovered by omitting the digitalis, and putting them on stimulants."†

These observations of Dr Corrigan have been for twelve years accessible to the profession, yet I do not remember to have heard them once acknowledged as just, while I have often witnessed the adoption of the practice which he condemns. Since I perused his paper several years ago, and had learnt how to distinguish the disease of which it treats, I have not had recourse to the protracted employment of digitalis in the treatment of it;

---

* Edinburgh Medical and Surgical Journal, vol. xxxvii. p. 242.   † Ibid.

but from what I have noticed of its lengthened employment by others, I have no doubt of the accuracy of his doctrine as a general fact. I cannot say, however, that my experience goes to the extent stated by him in the following sentence:—"In no case of this disease did digitalis produce the slightest good effect; and in all, the patients, while under its exhibition, were always worse." On the contrary, I have not unfrequently remarked considerable relief to result from its employment in cases in which the disease appeared to have been of no very long standing, or to have entailed comparatively little dilatation of the left ventricle, and to have produced but an inconsiderable impression on the general health. In several persons affected with the disease, yet still robust or plethoric, digitalis, aided by a moderate blood-letting even, I have known to produce very striking relief to oppression at the chest and difficulty in breathing; and I can account for the strong terms in which Dr Corrigan expresses the very different results of his experience, only by supposing that his cases were all in an advanced stage when the digitalis was administered. Yet I must add, that even in an advanced stage of the disease I have not found that "the patients while under its exhibition were always worse;" for it has pretty often happened that the medicine, though continued for a considerable time, had no effect on the frequency of the pulsations of the heart, and was unattended by any change in the symptoms.

What I particularly desire to solicit attention to, is the *general* impropriety of the ordinary practice in diseases of the heart,—repeated evacuations of blood, frequent and prolonged employment of digitalis, and scanty nourishment—in incompetency of the aortic valves; and as an example of the evils which result from it, I extract the following paragraph from Dr Corrigan's paper:—"One case may be mentioned, out of many that occurred, showing the bad effects of debilitating treatment on the disease before us, and exemplifying the evil of acting as if one principle were sufficient for guiding us in the treatment of all heart diseases. The treatment ordered was in accordance with that generally recommended, consisting of repeated small bleedings, blistering, the exhibition of digitalis, and the most rigid regulation of diet, a total abstinence from animal food, and even a spare allowance of vegetables and milk. At the time the patient, a young man, was put under this treatment, he was not in an alarming state; but the disease being recognised as heart disease, he had the fortitude to submit to a course which he was led to expect held out a prospect of cure. Bleeding after bleeding and blister after blister were repeated, starvation enforced, and digitalis exhibited, until the patient was reduced to such weakness, that he had scarcely strength to raise himself in bed. The local disease was all this time, however, growing worse; for the palpitation, cough, &c., were, from the slightest

cause, increased to a greater violence than previously to the commencement of the treatment. The plan was, nevertheless, persevered in, until the patient's death being supposed at hand, this debilitating treatment was discontinued. From that hour the patient got better; and as his muscular strength returned, the embarrassment of breathing, palpitation, cough, &c., became less and less urgent. The patient is still alive, the disease is still present; but with full living and good air he is able not only to take considerable exercise, but even to undergo the fatigue of a business that constantly requires very laborious exertion." (P. 241). I can adduce no example so fully illustrative of the truth and importance of the practical views promulgated by Dr Corrigan. I have, however, witnessed some cases in which the depleting and reducing plan had aggravated the sufferings, and others in which good diet and exertion, not carried to an extreme, had been felt the best adapted to the comfort and ease of the patients. One instance I remember of a porter, affected for a long time with this disorder, who continued for years fit for his laborious occupation, indulging repeatedly during the day in potations of malt liquor; and whether we credit his account or not, that he felt them necessary to the freedom of his breathing, &c., I was satisfied that, under the exciting influence of them, he exhibited no evidence of that suffering which could not fail to have been produced in any other kind of diseased heart, equally considerable, by the same habits.

In alluding to the diagnosis of this condition of the aortic valves in my former paper, I observed that it was perhaps easier than that of any other disease of the heart. But on this subject I have not leisure to enter at present, nor is it of consequence that I should, seeing that in Dr Corrigan's paper already referred to, in Dr Hope's work on diseases of the heart, and in a short essay of mine, published a few years back in the Edinburgh Medical and Surgical Journal, almost all that I could have to notice is fully detailed. The point which is chiefly dwelt on in the last of these accounts of the disease, is the lengthened interval which occurs between the impulse in the region of the heart during the contraction of the ventricles and the beat of a distant artery, such as the radial; and I would only mention here, in addition to what I have stated in that paper of the value of this sign, that it is sometimes present when none of the other signs commonly considered indicative of the disease are,—in particular when there is no regurgitant murmur.

Contributions to Infantile Pathology. By ALEXANDER D. CAMPBELL, M.B. Oxon, F.R.C.S.E., and Physician-Accoucheur to the Royal Dispensary.

Two Cases of Icterus Gravis Infantum from Deficiency of the Hepatic and Cystic Ducts, and one from firm Plugging of the Common Duct.

ALTHOUGH some of the following cases belong to that class in which our professional knowledge can be of but little avail, they are not without interest or means of improvement to the scientific practitioner. Mrs R.———, the mother of three children (two of which are alive and healthy), was delivered on the 20th of February of her third child, a female, having had no children for four years previously. During this last gestation, she suffered severely from pain in the right side; but except that, she had no other complaint than is usual in pregnancy. Her last labour was tedious, on account of the child being rather large and well developed. The day after the child was born, its whole body became exceedingly jaundiced; but as she took the breast regularly, and evinced no further evidence of indisposition, the icterus did not attract any particular attention; the funis separated naturally on the fifth day; the stools were constantly light-coloured; and the urine possessed a brownish tinge. On the ninth morning after birth, in consequence as was supposed of too much milk rushing to the pharynx, and a little perhaps entering the larynx, a fit of coughing supervened, which was followed by a discharge of blood from the umbilicus; and before the child was seen, it was supposed that the quantity lost amounted to about two ounces. Caustic and compresses were used, which suspended the effusion; there was also slight vomiting. The next morning I received a message that the hemorrhage had returned; a graduated compress was now applied, which again checked the effusion; on this occasion the loss had not been so copious. In the afternoon of the same day the compress was removed, when there was no appearance of there having been any new discharge; for the sake of caution, some of the pulv. alum comp. was applied to the umbilicus, and the compress replaced; the child, however, died in about an hour afterwards. The infant took the breast well to the last, appeared to suffer no pain, and expired without apparent convulsions or coma. The remedial measures employed were the administration of occasional doses of ol. ricini, hydrarg. c̄. cretâ, and calomel, all of which operated easily on the bowels, but produced no change in the colour of the stools. The blood which escaped from the umbilicus contained a large quantity of bile, as was evident from the deep tinge of biliary matter communicated to the clothes which received it.

Post-mortem examination forty-four hours after death.—The skin was universally of a bright yellow or lemon colour (*color*

aurantiacus), the body generally was well developed, and over the abdominal and thoracic muscles, adipose tissue was deposited in large quantity. The cavities of the pleura, pericardium, and peritoneum, contained a small quantity of serum slightly tinged with bile; the internal organs, the liver and spleen excepted, were of a pale yellow, and were all perfectly bloodless. The thoracic and abdominal viscera were then removed *en masse* in order to allow a more minute inspection. The liver naturally first attracted attention; it was of its normal size, and when cut into, it appeared somewhat softer than usual, full of bile, and of the colour of burnt umber. The gall-bladder was very small and collapsed, contained only a little mucus, in colour and consistence resembling gelatine, and *formed a close sac having no outlet, the excretory ducts leading from the gall-bladder and liver being absent.*

Through the kindness of Mr Miller, surgeon of this city, I have been favoured with the following case of a somewhat similar nature. " J. T. presented at birth all the appearances of a mature healthy child; on the following day the skin was observed to be somewhat yellow, but not more so than in cases of icterus occurring soon after birth. Instead of disappearing, however, as generally happens in that mild complaint, the jaundiced tinge became more deep and permanent. Within a few days after birth, the abdomen was observed to be rather tumid, in consequence of enlargement of the liver. The child sucked well, but was often attacked with diarrhœa and vomiting; the fæces were constantly pale and ash-coloured, and the urine of the usual saffron hue observed in jaundice. The skin was latterly tinged of a greenish brown. With the exception of the liver, which increased enormously, so as at least to occupy both the hypochondriac, the whole epigastric, and the greater part of the hypogastric regions, and even to dip into the right iliac fossa, the other organs seemed to remain stationary. The features gradually assumed a peculiarly shrivelled appearance, which, with their morbid colour, rendered the child a disgusting object. After surviving six months, it was carried off by an attack resembling one of cholera, having for some hours before its death incessant vomiting of large quantities of a matter similar to coffee grounds. On a careful *post-mortem* examination, *neither a gall-bladder nor bile ducts could be discovered;* the liver was very much enlarged; the vena portæ, hepatic artery, and hepatic veins were all perfectly normal; the yellow hue pervaded the internal organs generally, but was more particularly remarked on the inner coat of the blood-vessels."

The following case, in some measure analogous to the two preceding, I owe to the kindness of Dr Maxwell Adams of this city:—" *November* 1, 1843.—Mrs C. was delivered, after a natural labour, of a healthy male child; she had previously had

three children, two girls and one boy ; the girls are still alive, but the boy died on the eleventh day after birth, under circumstances which will be presently adverted to. On the third day after birth, the skin of the new-born infant assumed the usual yellowish tint of *icterus mitis*. There was no apparent derangement of any function ; yet the parents of the child, especially the father, expressed great uneasiness for his safety, from the circumstance of their former male child having become yellow about the same time after birth. They stated that the yellowness had increased ; that hemorrhage had occurred from the umbilicus on the seventh day, two days after the funis had been detached ; that it had continued with an increase in the yellow colour of the skin until the eleventh day, when the child died without experiencing any apparent pain, fit, or struggle, and only a few hours after partaking of the breast. The case appeared rather a singular one ; but as not much credit is to be attached to the accuracy of reports of disease by non-medical reporters, but little attention was paid to the recital. To the child then under treatment castor-oil was ordered to be exhibited ; and it was attempted to be impressed on the minds of the parents that the case was not of such a nature as to cause any unusual alarm.

" *Nov.* 4. The castor-oil had operated freely ; the meconium had disappeared from the stools ; the yellow tinge had become brighter and more vivid, involving the nails and conjunctivæ ; in other respects the child appeared to do well. Small doses of hydrarg. c̅. cretâ were ordered, together with the tepid bath, and gentle friction over the region of the liver and stomach.

" *Nov.* 7. I received a hurried call this morning, the nurse having observed, on removing the roller, that there was an oozing of blood from the navel. An astringent lotion and graduated compress were applied, which had the effect of arresting the hemorrhage during that day and the succeeding night. The other remedies were continued at more distant intervals. Yesterday the cord separated, leaving a clean and healthy surface.

" *Nov.* 8. The hemorrhage had returned this morning. The compress, which was soaked with blood, was removed, and a cork, made convex at the extremity, and covered with chamois leather, was substituted. The tinctures of the muriate of iron, and catechu, alum, and various other styptics, were severally applied, with the effect of at least restraining the oozing, which was not by any means formidable. The child was not feverish, nor did he appear to suffer pain or uneasiness.

" *Nov.* 10. The blood continued to ooze away from below the compress. The use of every means that suggested themselves to the other medical gentlemen who visited the child was persevered in. The loss of blood was inconsiderable, nor was

there any symptom of fever, spasm, or debility, present; on the contrary, the child appeared comfortable and thriving. The alteratives and gentle aperients were continued with the local means.

" *Nov.* 11. I was hurriedly called this morning, and on my arrival found the child dead. No alteration had taken place in the symptoms until a few hours before death, when he refused the breast, and gradually sunk into a comatose state, and almost imperceptibly expired. I do not think that more than one ounce and a half of blood was lost during the whole time the hemorrhage continued.

" *Autopsy.*—The body on being stripped was of a bright yellow colour, plump, firm, and well developed; and incision was made from the top of the sternum to the pubes to the left side of the umbilicus, leaving it, with the vessels entering the liver, entire for more minute inspection. Adipose tissue was deposited in large quantity below the integuments. The intestines, fatty parts, and in fact the whole internal organs, except the liver and spleen, exhibited the same golden yellow tinge as the outer skin. The liver appeared slightly congested and more dense than usual, but there was no sloughing of any of the vessels that had entered it from the funis, nor was there any trace of disease about the navel to indicate the source of the hemorrhage. The mucous membrane of the stomach seemed a little softened, and there were three or four small spots of ulceration observed upon its surface, which were attributed to the irritating action of the medicine administered. *The gall-bladder contained a quantity of bile which could not escape, owing to an indurated cord-like plug of inspissated bile, which occupied the duct leading to the duodenum.* The umbilical vein contained a clot about an inch in length. The head was not examined."

Of the preceding cases, the first and third are of the most interest, and more especially the latter, as in it there was a possibility of cure, but the former was beyond the power of any remedial measures. There are also many points of similarity between them. In both, the jaundiced tinge showed itself the day after birth; in both, the hemorrhage occurred two days after separation of the cord, in the one on the seventh, in the other on the ninth day after birth; in neither did the children appear to suffer the slightest uneasiness, but slept well and took the breast well, until within a very short period before decease; in the latter case, its interest was increased by the circumstance, that the parents had previously had a child affected in the same way, and which died from the same disease; and in both, the children were very stout and healthy, and much adipose tissue was deposited in different parts of the body. In no author that I have been able to consult have I found any similar cases. The earliest writer who advances the idea that icterus is hereditary is Mor-

gagni : he says, " In fifteen children of my own, who all became yellow after birth, and some of them in a considerable degree, the disorder was naturally carried off in every one of them of itself, and without the least assistance of art."* An instance, however, is given by Underwood, of a lady, the mother of eleven children, nine of whom became jaundiced on the third day after birth, and all died within the first month ; the tenth died of the same disease in its sixth month ; and the eleventh became yellow on the third day after birth, appeared drowsy and sleepy, and was convulsed. " On the following days the colour of the skin often varied, being sometimes of a deeper yellow, at other times regaining nearly its natural colour ; the child, however, continued in the same state, but received nourishment, and sucked the breast of its mother, till within a few hours of its death, which took place on the ninth day." *On dissection*, the liver was found nearly twice its natural size, and in some parts highly injected. The gall-bladder was nearly filled with bile of a deep yellow colour, and its ducts were permeable.†

It is clear that this jaundice alluded to by Morgagni must be a very different affection from that described by Underwood ; that it is in fact nothing more than the coloration of the skin that goes under the name of " the gum," a disease (if it deserve the term) that disappears without any treatment at all. Various causes have been assigned for the occurrence of icterus in new-born children. Morgagni‡ thought that it arose from the supply of blood to the liver being diminished by the contraction of the umbilical vein having extended to the vena portæ ; nearly the same opinion was held by Autenrieth.§ Chambon‖ and Jahn thought that icterus was induced by pressure on the fœtal cranium during labour. We well know that in adults inflammation and abscess of the liver frequently follow injury of the head ; but we have yet to learn that icterus is more common in children born after a labour complicated with contracted pelvis, or after the application of forceps, than in those born with the usual ease. Baumes¶ considers, as the cause of the disease, a collection of meconium or other irritating matters in the duodenum, either from the irritation excited producing spasm of the ductus communis choledochus, or from their actual quantity obstructing by mechanical pressure that portion of

---

* Lib. iii., Lit. 48, Art. 60.
† On Diseases of Children, 7th Edition, p. 31.
‡ De Sedibus et Causis Morborum, Epist. 48, Art. 60.
§ Observationes Pathologicæ.
‖ Ueber Kinderkrankheiten, Bd. i. Abthl. i.
¶ Mémoire sur l'Ictère des Nouveaux-nès.

the duct which runs between the coats of the duodenum. Rosenstein* says, " As to the causes of jaundice, we shall find them to be such which effect a stoppage in the channels that carry the gall or bile from the liver. Therefore slime, or glutinous liquids, may cause the jaundice in new-born children by shutting up this opening " (the aperture of the duct. com. chol.) He thinks also that lumps of curdled milk or pap might have the same effect. It has been remarked both by Rosenstein and Tissot, that as the duct. com. chol. runs for a space between the tunics of the duodenum, griping, causing contraction of the muscular layer of the intestine, will produce constriction of the canal, showing how very easily the passage of the bile into the intestine may be obstructed. Various other causes have been assigned by different authors, e. g. invagination of the duct. com. chol. (Fabricius Hildanus); sudden chilling of the body (Boer. Wendt. Joerg.) ; improper nourishment (Carus Levret et alii). There can be no doubt that we must regard obstruction of the duct. com. chol. as the cause of icterus : it is immaterial whether the obstruction arise from spasm, pressure, or viscidity of the secreted bile ; if it be from absence or imperforation of the duct, then we may look upon the affection as inevitably fatal, although in the second case above related we have a singular instance of a child having lived for six months without bile ducts. The absence of a gall-bladder (provided the ducts are present) need not be regarded as a certainly fatal malformation, any more than the absence of a urinary bladder, for they both apparently serve merely as the passive recipients of their respective secretions, until the proper time arrives for their expulsion.

From the circumstance of very many children becoming more or less yellow soon after birth, and from the coloration of the skin being unattended by any symptom indicative of functional derangement, and disappearing without the help of art, many practitioners are inclined to regard this yellowness as an appearance as natural to the healthy child as desquamation of its cuticle. We must, however, consider this yellowness as a morbid appearance, but perhaps not always pathognomonic of hepatic derangement. When it is so, we should expect to find the coloration universal and uniform ; but at times we see it confined to the face, to the trunk, to the extremities, or perhaps to one extremity only ; disappearing in one part of the body suddenly, to reappear in another. In this affection the conjunctiva and nails frequently present no discoloration, nor are the stools of the clay-colour so constantly observed in jaundice from derangement of the liver. " Jaundice in children," says Underwood, " seems always to have been improperly conceived of. Those who have written on

* Rosenstein on Diseases of Children, trans. by Sparrman, p. 200.

children's diseases have usually passed it over in silence, whilst others have considered it rather a serious complaint, and have prescribed as for the jaundice of adults. On the other hand, nurses have usually accounted the yellowness that appears about the third day after birth, if unusually deep (termed by some the ' yellow gum '), as the true jaundice. Certainly neither of these opinions is just; this (*i. e.* the true jaundice) is easily distinguished from the common yellowness by the tunica albuginea being *always* (?) very yellow, but the nails are not tinged." The observations made above being corroborated by so high an authority, I think we are warranted in concluding that the affection known under the term " *icterus mitis* " or " yellow gum," strictly so called, does not invariably depend on disturbance of the hepatic function. But when icterus arises from disordered secretion of bile, the coloration is in general universal and uniform, is accompanied with symptoms of derangement of the digestive functions, *e. g.* flatulence, vomiting, griping, and clay-coloured stools, occasionally also with fits or spasms ; and on dissection the coloration is found not confined to the skin only, but extending to the subjacent tissues and most of the internal organs. Among the cases above related there was in one coma, in another vomiting, in a third diarrhœa, and in all the light-coloured stools, with yellowness, not only of the skin, but also of most of the viscera. There was, too, another symptom, unusual, and of more importance and danger, viz. the umbilical hemorrhage. This probably arose from blood being continually poured into the liver, and bile being secreted, but finding no exit, the organ became highly congested, and the most ready passage through which it could free itself being the umbilical vein, blood mixed with bile accordingly escaped through that canal. The hepatic vein might for a time serve to carry off the superfluous fluids from the liver, but ultimately, when the congestion increased, it alone proved insufficient. We can thus easily explain the yellowness of all the tissues, for we may suppose that the bile, unable to escape, either broke down or permeated the fine tunic of the minute venous origins, and was thus conveyed by the hepatic veins into the general circulatory system. In one of the cases above related, the blood that escaped from the umbilicus coloured the linen deeply with the tinge of bile, proving that this fluid had entered the circulation, which it must have done directly, as it was impossible that in any of the preceding cases it could first have been taken up by the absorbents from the intestinal tube. Were I again to meet with cases similar to the above, I should adopt a different mode of treatment, on the presumption of course that the obstruction was not immovable. It appears to me that the administration of mercurials is only calculated to increase the mischief, for they excite the secreting functions of the liver to greater activity, and bile, which cannot escape, is more abun-

dantly formed. We ought to endeavour as far as possible to cause relaxation of the ducts. This object would be attained by the application of leeches, the use of the warm bath, with antimonial or ipecacuan wine given in nauseating doses *only;* for where there is tendency to umbilical hemorrhage an emetic might be productive of disastrous consequences. If the child appeared to be much griped, we might presume that the obstruction to the passage of the bile arose from the duct. com. choledochus being constricted by contraction of the intestine; opium and aperients would then be beneficial.

4 PICARDY PLACE, *July* 12, 1844.

Practical Observations on some of the Chronic (or Functional) Diseases of the Stomach, &c. &c. By WILLIAM STRANGE, M. D., M. R. C. S. Edin., Surgeon to the Ashton-under-Lyne Dispensary.

(*Continued from* No. III., p. 172.)

ANDRAL has pointed out a variety of morbid irritation of the stomach, " embarras gastrique," in which purgatives with emetics are extremely useful, and which indeed appears not to be amenable to any other kind of treatment. Mr Langston Parker* also relates cases in which all remedies failed to give relief until antimonial emetics were administered. Immense accumulations of secreted matters were evacuated, and the symptoms immediately disappeared. In dealing, however, with every case of morbid irritation of the stomach, we must be careful to distinguish the original lesion which has preceded the present symptoms; for unless this be done, no treatment will be successful. Looking upon most kinds of morbid irritation of the stomach as originating in a want of tonic contractility of that organ, I believe that there are in reality very few cases which can be satisfactorily terminated by this simple mode of treatment. The cases which appear to me to be properly treated by active purgatives with emetics are those of recent standing, where there have been errors of diet, principally in regard to quantity; as where the meals succeed each other too quickly, without a sufficient amount of muscular exercise intervening. In such cases the tongue is loaded with a thick yellow fur, the countenance is puffy or sallow, the conjunctiva jaundiced, the bowels are confined, with whitish scanty motions, or the evacuations may be loose and dark coloured. The pulse is generally slow, full, and compressible. These symptoms depend upon congestion of an active kind both of the liver and stomach, to which

---

* The Stomach in its Morbid States.   1838.

the morbid secretions are of course owing. Whatever clears away the accumulated secreted matters, and unloads the venous system of the whole chylopoietic viscera, will therefore relieve the symptoms at any time, hence the constant recourse had by free livers to drastic purgatives; but a cure can only be effected by a complete change in the dietetic management of the patient. There is another and in some places much more frequent form of morbid gastric irritation to be met with, which is by no means so amenable to the evacuant treatment, " par en haut et par en bas," so useful in the former kind. Persons employed in crowded workshops, such as tailors, milliners, confectioners, the attendants in many kinds of sale-shops, and the work-people of our silk and cotton factories, are its chief victims. There is equally a state of congestive irritation of the stomach, and often of the liver and the other abdominal viscera, in these as in the former cases; but the symptoms are all of a *passive* kind, and lead us to suppose that not a hyperæmic or congesto-inflammatory action, but a torpidity or a dynamic state of the motor powers of these organs is the proximate cause of the mischief.

It would be folly to treat these cases with active evacuants, such as purgatives and emetics. The general anæmic and often emaciated appearance of the face and form, accompanied with want of appetite, languor, and debility, shows that an improved state of the blood and motor powers is required. Guided by these considerations, I have found that gentle laxatives with tonics, as the pil. ferr. c̄. aloe., and a mixture composed of a vegetable bitter, as infus. calumbæ, with the hydriodate of potash, with once or twice a mild mercurial purge to stimulate the liver, prove the best treatment.

Such cases, when they occur in young females, are often complicated with chlorotic symptoms, and other indications of deranged menstrual function, palpitation of the heart, sick headach, pain in the loins, &c., and are signally benefited by small doses of iodine, as in the preceding formula; replaced after a time by the sulphate, muriated tincture, or citrate of iron, as shall best suit the individual case.

Another form of atonic morbid irritation of the stomach is that which almost always succeeds to excessive hemorrhages or other evacuations, to menorrhagia of long standing, and to debilitating diseases. There can be no doubt that these cases admit of no other treatment than the direct tonic plan carefully executed; and every means of throwing nutritious substances into the circulation must be used. It is here that iron may be said to act as a real specific, as, by increasing the amount of the red particles of the blood, it gives tone to the enfeebled and softened parenchyma of the organs. But it is to the dietetic and regiminal management that we are to look for permanent amendment in those very common and troublesome disorders.

I do not here make mention of the various means and appliances, such as change of air, drinking mineral waters, travelling, out-door exercise, &c., which only the wealthy, or at least those in easy circumstances, can command. My experience of gastric disorders has been principally acquired at the bedside of the operative, and it is for his benefit chiefly that I write.

Before we can devise any change for the better in the hygienic management of the operative classes, we must take a survey of the circumstances, physical and domestic, by which they are surrounded, and which may operate as a cause of the frequent occurrence of atony and morbid irritation of the sto-mach amongst them.

I am far from being wishful to recruit the ranks of those who have written and spoken so much about the baneful effects upon the health produced by factory employment, and of the nume-rous diseases *peculiar* to this class of work-people; and I believe that extensive observation enables me to assert, that there is *no peculiar* disease, nor *peculiarly prevalent* disease, amongst the workers in the factories. Indeed, how should there be? We know that the same physical causes which are sup-posed to operate so detrimentally in a cotton factory, exist and act in many other localities; in fact, in all where numbers of human beings are densely crowded together. These causes are, confinement in an unvarying temperature, sometimes a rather close, and in one instance a very elevated one; insufficient ven-tilation; in some rooms dust and bad smells; rather long hours of work, without any great muscular exertion.

Mr Chadwick* has cited instances which came out before the commissioners for inquiring into the sanitary condition of the labouring population of Great Britain, where 150 tailors worked twelve hours a-day in a room many times smaller and worse ventilated than the most unwholesome room in any cotton factory in Lancashire. The crowding of milliners, too, in close garrets in London, for twelve, sixteen, or even twenty-four hours to-gether, is never equalled in any factory. Many kinds of work-shops, prisons, and public schools are not better.

But notwithstanding that I cannot admit that any peculiar disease, nor peculiar form of disease, is generated by factory labour any more than by any other kind of employment in which the workpeople are equally crowded, it is very evident that almost all diseases, and the constitution also, receive a very considerable modification by the action of certain causes upon the factory population and all that are similarly situated. A glance at the dense masses of young people, as they issue from a cotton factory, will strike the stranger with a vivid sense of the difference between their pallid cheeks and flabby muscles, and

---

* Report on the Sanitary Condition of the Working Population of Great Britain.

the robust, rosy, and firm appearance of those employed in out-door labour in the country. If we trace the cause of this differ-ence, we shall discover the reason why gastric disorders are so much more frequent amongst the former than amongst the latter class of operatives. Every thing shows a want of tone or firmness of the general tissues of the body in those whose employment, in the midst of large towns, confines them many hours of the day in a close unvarying temperature, such as that of most factories and other workshops; the air, surcharged with exhalations, both from the overheated bodies of the operatives, and from the greasy machinery, &c., is, in consequence of too often insufficient ventilation, breathed over and over again without being com-pletely changed. The muscles of the body become less consis-tent and tense, and consequently contract less vigorously; the skin is relaxed by the warmth of the atmosphere; the venous circulation becomes languid, and the capillaries transmit the red particles of the blood more slowly and in less quantity; hence the pallor. As a natural consequence of this state of the superficial circulation, the blood returns in less quantity to the right side of the heart, and when sent to the lungs, not there meeting with a sufficient stimulus in the contaminated air inspired, is imperfectly oxygenized, and therefore proves an insufficient stimulus to the left ventricle. Hence arises the weak and irri-table pulse, the extended contractions but weakened impulse of the heart. The muscular substance, as I believe, in many in-stances becoming softened, favours the development of dilatation of the right side, so often accompanying the forms of disease above described.

We shall not deal too much in hypothesis, if we contend that from the operation of the above causes, and the disordered nutrition which is thereby secondarily induced, every tissue of the body, the parenchyma of all the organs, becomes lax, softened, and, to use a mechanical phrase, *disintegrated;* and by consequence those vital properties which depend upon the close aggregation of their constituent particles, viz. tonicity and muscular contractility, become weakened and impaired.

That this very evident though not visible change in the tissues of the body really takes place in those forms of atony and morbid irritability of the stomach which I have described, is argued in a very masterly manner by Andral* in the following passage:—" Certes, c'est se fonder sur une raisonnable analogie, et ne point s'écarter des lois d'une saine philosophie, que d'ad-mettre que, dans le cas où les principaux agens de la vie, le sang et le système nerveux, ne nourrissent et n'excitent plus suffisament les organes, la force toute vitale d'agrégation par laquelle sont réunies les différentes molécules des tissus vivans, cette force,

---

* Clinique Médicale, 3ème Edit.

dis-je, cesse d'avoir son intensité physiologique ; de là, diminu-
tion de la cohésion de ces tissus, et leur ramollissement plus ou
moins considérable, depuis le degré où, comme on le dit vulgaire-
ment, *il y a flaccidité des chairs*, jusqu' à celui où, pendant les
caractères de l'organization, le solide tend à redevenir liquide."

Dr C. J. B. Williams[*] has well remarked, that in proportion
as the tonicity and vital contractility of organs become impaired,
their irritability increases ; so that the less susceptible they are
of a normal action from a wholesome stimulus, the more readily
do they take on an abnormal action by the application of morbi-
fic agents. Hence we may understand with what increased
force unwholesome food, errors of diet, intemperate habits, &c.,
act upon the stomachs of those who are daily exposed to the
causes of atony and general debility above described.

I have observed that in most cases of morbid irritation the
domestic management of the operative's family powerfully
seconds the morbific action of the factory or workroom. The
methods of cooking are often very defective, too frequent use
being made of fatty, raw, and other indigestible substances.
This, together with the very hasty manner in which the princi-
pal meals—breakfast and dinner—are swallowed, soon superin-
duces a degree of morbid irritation on the previously existing
atonic condition of the digestive organs.

To provide a remedy for the occurrence of these frequent
disorders, then, we must entertain large views of the necessity
for some kind of supervision of the arrangements as to venti-
lation, site, size of rooms, and other sanitary conveniences of
factories, workshops, and other public or quasi-public buildings.
Without insisting upon too much magisterial interference with
the employment of labour, it would be easy for an influential
and well-educated officer to take care that proper arrangements
should be made for the above sanitary purposes whenever new
factories or similar places are erected ; and that improvements
should be adopted in this department, so far as practicable, in
existing ones. Free ventilation, with abstraction of all dust and
a great deal of the smell, is perfectly attainable, and is in many
instances amply provided for ; and those manufacturers who
have carried out these wholesome arrangements insist upon their
practicability in almost every instance.

On the part of the operatives themselves much might be done
by improved domestic economy and temperance, and particularly
by the establishment of public baths at a cheap rate ; a luxury—
I might say a necessary one—possessed by few of the manufac-
turing towns in the north of England.

I would also suggest the adoption of the plan of increasing the
length of the principal meal hours. Half an hour for breakfast

---

[*] Principles of Medicine. 1843.

and an hour for dinner is not sufficient for those who have a considerable distance to go, as more than half of the time is frequently expended in going to and from the place of work. The meals are in consequence hastily swallowed, and muscular exercise is commenced too soon afterwards. By extending the time allowed for breakfast to three quarters of an hour and for dinner to an hour and a half, more time for a short rest would be obtained. The operatives would, no doubt, prefer to have this extra time after the labour of the day is done by curtailing the number of working hours; into this question, however, I do not enter. I merely suggest an improvement in the regiminal management of the digestive organs.

It is astonishing that, with so many popular works on diet and the management of health, lectures at mechanics' institutions, and other sources of information for all classes of people with which the present age teems, there should be such gross ignorance prevalent amongst the lower middle and working population. Entirely ignorant of the action of the different kinds of diet upon the system in sickness and health, they commit the most dangerous blunders. We must not reckon, therefore, upon their own good sense in the dietetic management of atony and morbid irritation of the stomach, but we must lay down for them an absolute diet-roll, and positively interdict all other articles of food whatever. We find that those who suffer from bad digestion, the women especially, in consequence of the pain which all heavy articles cause them, take little other sustenance than slops, such as tea, broth, gruel, &c., and these often in immense quantities. Nothing can be more hurtful to the morbidly irritable mucous membrane. The excessive distention completely paralyses the already adynamic muscular fibre, and the load lies undigested, until chemical changes from fermentation take place, which give rise to gaseous eructations, acid regurgitations, heartburn, and other distressing feelings. A mild diet, principally composed of farinaceous articles in a solid form, I have always found most agreeable to the atonic state of the stomach in these disorders; it may consist of rice, bread, sago, or tapioca puddings; rice, milk, small quantities of good and well-seasoned broth; and, after a while, of lean animal food in quantities not exceeding four ounces at once. Butter, cheese, jellies, and for the most part eggs, and all other highly azotized substances, should be entirely forbidden.

3d, *Acute morbid irritation.*—It is to be lamented that medical writers are too often chargeable with great laxity in the use of physiological terms, on the right application of which depends the comprehension of their ideas by others in the sense in which their authors conceived them. We find the terms irritation, irritability, sensibility, morbid irritability, and morbid sensibility, continually used by authors of works on stomach diseases in the

same sense and to describe the same state of the digestive organs ; and, on the other hand, many very different affections of these organs are comprehended under the same terms. An acute irritation of the stomach, in which it rejects or refuses to digest every article of food or drink, is too often designated as an ex- alted state of *sensibility*, although there may be no pain accom- panying it ; thus leading the correct physiologist to suppose that the nervous system is the chief part implicated, when the proper expression would be *acute morbid irritation ;* meaning thereby, that the concord between the food as stimulus and the stomach as an irritable organ is destroyed, and that instead of a healthy action, digestion, taking place from the consentaneous operation of the two upon each other, a morbid action with acute symptoms results, in consequence of either the stimulus or the irritable organ having become deranged.

For a morbid action of an irritable organ may be occasioned in three ways : 1st, The organ itself being sound, an unnatural stimulus may be applied,—as in the case of the stomach, food highly indigestible, or taken in too large quantities, or too often ; 2d, The stimulus being a natural one, the organ itself may be in a morbid state, atonic, congestive, inflammatory, &c., and therefore unable to act on the stimulus in a healthy manner ; and, 3d, Both the stimulus and the organ being in a healthy state, yet from idiosyncrasy, climate, age, &c., they may not be adapted to each other ; whence, in the case of the diet, it follows that nice discrimination and experience must be used.

Acute morbid irritation of the stomach betrays itself by such symptoms as cannot easily be mistaken by an attentive practitioner. There is acute pain in the stomach after taking any kind of food, which is not relieved until the latter passes out of that organ, which it often does by vomiting coming on either immediately or very soon after food has been taken ; sometimes such a spasmodic action ensues, that the smallest portion either of food or drink is instantly rejected, even before it seems to have had time to enter the cardiac orifice. When the food is retained and partially digested, it is often forced prematurely out of the stomach and small intestines, in consequence of the irritation which the imperfect chyme produces on the duodenum ; in this case the motions very much resemble the food which has been eaten. The bowels are, however, in a great majority of cases, obstinately confined, and then the reduction of this state is often the first harbinger of relief. Vomiting also occurs at uncertain intervals during the day, the matters ejected being bilious, or composed of a glairy mucous fluid, sometimes in immense quantities. There is also regurgitation of acid matter, and occasionally, but rarely, of a tasteless water (water-brash). The tongue is very variable in appearance, it being sometimes very clean, red, and moist ; or

red and dry, having a baked appearance; or brown and dry; or moist and loaded with a thick yellow fur. The pulse is either very slow and full, or quick and thready, sometimes intermitting. The countenance sunk and haggard, exhibiting signs of suffering. This form of gastric disorder manifests great variability in the length of its attack and the severity of its symptoms. In some cases, such is the violence of the spasmodic action, and the disturbance of the circulatory, respiratory, and nervous systems, that almost instant death is threatened; in others, the symptoms, of a chronic and scarcely observable state, creep on from bad to worse, until digestion is scarcely performed at all, and extreme emaciation follows. This is often the case in those aggravated forms of dyspepsia, as they are called, to which I alluded in a former part of this paper; viz., when the complaint begins with a simple state of atony or debility of the stomach, passing into a low chronic irritability in consequence of errors of diet or bad treatment, and thence into acute morbid irritation.

The symptoms have also remarkable remissions. Some patients are exempt from any very distressing feelings for weeks or months together; others have almost periodical remissions and exacerbations which are relieved by vomiting a quantity of mucous fluid. In some instances there is more pain when the stomach is empty; but when such is the case, I am inclined to consider the symptoms as more dependent upon a neuralgic or upon a congesto-inflammatory action, than upon a simple irritation of the mucous and muscular coats of the stomach. The two following cases will illustrate the foregoing observations.

Case 1*st.*—A gentleman, convalescent from a subacute attack of bronchitis and pneumonia, contrary to orders, indulged in a dinner of hashed veal before leaving his bed. In the middle of the night I was called to him, with word that he was in a dying state. I found him naked, wrapped up in blankets, sitting before a large fire, perspiring from every pore, and rolling about unable to speak from intense agony; pressing upon the pit of the stomach, and making ineffectual efforts to vomit. The pulse was fluttering and not more than eight beats per minute; respiration exceedingly short and difficult, as much so as in acute pleuritis. I instantly administered an emetic, which in less than an hour completely removed the symptoms. Such was the intensity of the constitutional irritation in this case, that I believe death would have speedily ensued had not assistance been promptly rendered. What, may we suppose, was the state of stomach in this instance? Inflammatory action could scarcely have been induced, or it would not have vanished so immediately; neither was vomiting excited until the emetic was given. Doubtless the veal acted

upon the stomach in its then adynamic state, the consequence of illness, as a foreign body, irritating the mucous membrane and the nerves to the alarming degree I witnessed.

Case 2d.—A young woman of a highly sanguine temperament, nine days after a good delivery (the lochial discharge, which had been copious, having suddenly stopped), was seized with violent vomiting and purging, for which acet. plumbi and opium in small quantities were given, with relief to the purging. The vomiting, however, continued without intermission for seven days ; every thing which was taken— medicine, food, or drink—being rejected before it had remained in the stomach half a minute. The pulse was throughout the whole time unaltered ; there was no pain on pressing the epigastrium, only uneasiness when anything was taken. The tongue and fauces were vividly red throughout, clean, and without aphthæ ; in fact, there was no evidence of inflammatory action whatever. The strength was but little diminished, although for seven days not a particle of sustenance was retained. Saline draughts, acetate of lead, opium in substance, hydrocyanic acid, creasote, and calomel were all tried without any effect, as were also sinapisms to the stomach and to the feet. Large quantities of gruel, as a pint at once, were the first to rest on the stomach, after which the vomiting subsided.

We can scarcely attribute these symptoms either to inflammatory action or to irritating articles of food; as in the one case more constitutional symptoms would have exhibited themselves, and in the other the vomiting, by relieving the stomach of the offending substance, would have very shortly cured itself. Most probably a congested state of the mucous membrane had taken place, in consequence of the cessation of the menstrual flux, particularly as large quantities of mucus were ejected from the stomach.

There is a variety of acute irritation of the stomach which appears to be owing to a more passive kind of congestion. Confinement in a close atmosphere, sedentary occupations, habitually inhaling mephitic odours, uneasiness of mind, pressure upon the epigastrium, and bad living, are the most frequent causes of this form of disorder. In these cases the tongue is generally very white, with red and elevated papillæ underneath the thin fur ; the edges and tip more or less red, and sometimes indented. The breath is hot, with a bad odour ; there is almost total loss of appetite, or a craving only for very savoury and indigestible food. The muscular strength is much diminished, and the body emaciated. The urine is high coloured and scanty, and generally deposits lithic acid, sometimes the ammoniacal salts. The bowels are often obstinately confined. With these patients digestion seldom takes place without more or less pain, though vomiting of food occurs only occasionally, and in an irregular

manner. Large quantities of food are secreted by the stomach, and rise in acid or acrid regurgitations, accompanied with flatus. There is also much gas voided along with the scanty stools. After this state of things has continued some time, various sympathetic affections set in, such as neuralgic attacks of the stomach, heart, face, or pericranium; sleeplessness, with starting and fearful dreams; palpitating and epigastric pulsations, with irregularity of the heart's action; disease of the kidneys, heart, or lungs. The following interesting case will exhibit the manner of invasion of some of these symptoms :—

Case 3d.—A schoolmaster, aged about 60 years, had long suffered from a slight degree of dyspepsia, arising doubtless from the confinement consequent upon his occupation, he having formerly led a more active life. Within ten yards of the schoolhouse ran an open sewer, into which a little higher up than his school a factory reservoir emptied itself, the hot water from which, rising in steam as it passed along, carried with it the gaseous exhalations of the sewer, the smell of which was most offensive. About the time of the more acute symptoms making their appearance, the patient experienced a great deal of anxiety and grief in consequence of the departure of his son as a missionary, along with the Rev. Mr Moffat, for Southern Africa. At this time he exhibited many of the characteristic symptoms of acute irritation of the stomach related above, viz., quick and irritable pulse, hot dry skin, tongue covered with a thin and very white fur, the red papillæ appearing underneath. The epigastrium, always uneasy, was intensely painful after taking any kind of solid food; bowels obstinately confined; face sunk and careworn; failure of the muscular strength, and emaciation. Vomiting was only occasionally present. Counter irritation, leeches, and other antiphlogistic treatment failed to give any marked relief; purgatives, bismuth, and tonics were not more useful. The symptoms increased in severity, until after a while intense neuralgic pains of the stomach and face came on, the irritation from which afterwards gave rise to twitchings of the limbs and starting, so that he could scarcely be kept from rolling out of bed at night or falling from his chair. The stomach was now so irritable, and affected with such severe paroxysms of pain, that I was obliged to restrict him to the very lightest food in small quantities, and eventually advise him to give up his school altogether, for which he had been long unfitted by bodily weakness and extreme depression of spirits.

On exchanging the school for an out-door occupation, the symptoms of irritation gradually subsided; he improved in appetite and flesh, and slept better; but the neuralgia of the face attacked him several times afterwards, and only disappeared after a good deal of treatment. In this case almost all the varieties of gastric disorder which I have enumerated at the

beginning of this paper, as constituting the compound disease of dyspepsia, were present during some part of the attack. Commencing with an atonic and debilitated state of the organ, it gradually passed into a chronic state of morbid irritation; then, on the accession of fresh causes of mischief, acute irritation, neuralgia, and perhaps some degree of chronic gastritis, succeeded.

In respect of the treatment of this disorder, nothing fixed or certain can be laid down for general adoption. All our remedies will often fail to give any marked relief; and when the disease has been of long standing, even the removal of the cause will not always speedily dissipate the symptoms. Regard must ever be had to the true pathological condition of the mucous membrane, so far as can be ascertained, and our remedies directed either against the disordered condition of the organ, or the errors of diet or offending ingesta, as the case may be. When called upon to allay urgent vomiting, if we can satisfy ourselves that there is a congested state of the mucous membrane bordering on inflammation, which will generally be indicated by a full and slow pulse, redness of the tongue and lips, and constipation, we may begin with leeching the epigastrium, followed by sinapisms, an emetic, and afterwards by purgatives of calomel and aloes, &c. If, on the other hand, the stomach and other digestive organs appear to suffer from a low and adynamic state of hyperæmia, where there is chronic vomiting only, with acid eructations or water-brash, I have found the following formula useful:—

R Bismuth trisnit.,
Sodæ bicarb. āā.　　　　3i.
Acid. hydrocyanic.　　　gtt. xii.
Infus. calumb. et cinnam. ʒvi. M.

Half an ounce to be taken every two hours, with the pil. ferri c̄. aloe. every night.

To allay vomiting in acute morbid irritation of the stomach many remedies are in daily use, but all too often fail to act satisfactorily. No great faith, so far as my experience goes, can be placed in creasote, hydrocyanic acid, acetate of lead, opium, effervescing draughts, &c., although each of them is sometimes successful, especially large doses of solid opium. Large doses of calomel, 6 or 8 grains, and sometimes small ones, as half a grain repeated every hour, frequently give great relief. Some articles of diet occasionally succeed when all medicines are rejected, for instance gruel and water, in which a blackened toast has been soaked. The bowels must be unloaded in every case. Dr Abercrombie relates a case from Dr Parry, in which very small doses of aloes alone allayed a very obstinate vomiting. The food, in small quantities, must be chosen according to our experience of each case. Tonics, cold sponging and bathing, are

useful in completing the cure.   I have known the most aggra-
vated symptoms frequently removed by the patient going for a
week to the seaside.

<p align="center">(<i>To be continued.</i>)</p>

---

*On the Evidence for the ready Curability of the more acute Form of Hydro-
cephalus in its earliest Stage, and the Practicability of the Diagnosis in the
Generality of Cases.*   By ALEXANDER HARVEY, M.D., Lecturer on the
Institutes of Medicine in Marischal College and University, Aberdeen.

I PURPOSE in this second communication on the subject of hydrocephalus,
to inquire whether that disease, in its more acute form and in its earliest
stage, is not much more generally amenable to active treatment than many
suppose ; and whether the diagnosis of that form of it may not then be
generally made out with sufficient confidence to warrant active interference.

Though perhaps unnecessary, after the qualified announcement now
made, yet, to obviate misapprehension, I am anxious to avow, at the outset,
my conviction, that there is a set of cases of hydrocephalus to which the
following observations will not apply, *i. e.* that there are cases where the
early symptoms are so obscure as to excite no suspicion of their real nature,
and where the inflammation is from the first of so intractable a character,
or the bodily habit of the patient so feeble, that active treatment can neither
be well borne, nor be expected to be of much avail.   These cases are gene-
rally somewhat slow in their progress, occur in connexion with inflamma-
tion, or a constitution of a decidedly strumous character, and often supervene
on other diseases at their close or during their course.   How far *all* the cases
to which this general description applies are not to be either recognised or
cured in their earliest stage, I do not now inquire ; but setting the whole of
them aside, there still remains a large number of others which may fairly
be brought under consideration in reference to the present inquiry.

I. The acute hydrocephalus being an inflammatory disease, or one " so
nearly resembling inflammation as to demand the same practical considera-
tion," analogy would lead us to expect that, although (as ample experience
shows) it quickly passes into a state which is nearly beyond the power of
remedies, it should nevertheless in its early stage be equally amenable to
them as any other incipient inflammatory disorder.   This expectation,
however, to be satisfactory, must be tested by experience, because we cannot
beforehand be certain that there is not some peculiarity in that inflamma-
tion, or in the parts affected by it, to render it from the first nearly if not
quite incurable.

Is that expectation, then, justified by experience ?

In regard to this question, it is obvious that we are met at the very
outset by a serious difficulty.   As there is no single symptom, nor any
combination of symptoms, attending the early stage of the disease, absolutely
pathognomonic, we can never be *certain* that any given case or set of cases,
which seemed to be examples of it, and have recovered under active treat-
ment, either were of the nature they appeared to be, or have been cured by
the remedies made use of.   Therefore, in considering the question proposed,
the *kind* of evidence which the nature of the case admits of must be care-
fully borne in mind.   Demonstrative it cannot possibly be.   It can never

amount to any thing higher than probability. But "probable evidence admits of degrees, and of all variety of them, from the highest moral certainty to the very lowest presumption."

Keeping this in mind, it may next be stated that the only evidence which we either have or can have for the curability of this disease in its early stage, is,—

1st, That cases have terminated favourably which presented symptoms, both local and general, precisely similar to those attending the early stage of others which have ended in fatal hydrocephalus.

2dly, That the blood drawn from the arm, in those that recovered, has been both sizy and contracted (*i. e.* characteristic of inflammatory disease), and easily distinguishable from the blood of incipient fevers, the crassamentum of which is not sizy, and is often comparatively loose.

3dly, That the convalescence has been so rapid and complete as to indicate that an inflammatory disease has been *cut short;* whereas febrile disease of any kind, not dependent on inflammation, does not admit (as a general fact at least) of being so quickly arrested by remedies.[*]

Such and such alone is the kind of evidence by which the question as to the curability of incipient hydrocephalus is to be determined or can be solved. But indirect as it is, and liable to fallacy, yet, if based on a sufficient number of cases, and setting aside many of these as spurious, it may still be strong enough and ample enough to satisfy every reasonable mind.

What, now, is the positive testimony of practical physicians, of approved judgment and extensive experience, in regard to the question at issue?

Dr Abercrombie[†] says, "There is no doubt that *many* cases have recovered which exhibited all the usual symptoms of hydrocephalus," several examples of which are given by him in the sequel of his work (p. 146). And again, "By active treatment, adopted with decision at an early period, we have the prospect of arresting its progress in *a considerable proportion* of cases." (P. 145.)

Dr Watson,[‡] although he does not give any formal statement on the subject, suited for quotation, yet delivers his sentiments in such a way as plainly implies his persuasion of the great efficacy of active treatment when had recourse to in the early stage of hydrocephalus; and, *inter alia*, while he states that "when once it is fairly established, many more die of it than recover," he adds that "our chance of saving the patient's life by appropriate treatment is always greater in proportion as the complaint, or the tendency to the complaint, is detected early." (P. 428). And again, after attending to seventy-six cases of the disease occurring in the practice of different physicians named by him, and of which nineteen recovered, he goes on to observe that "the cases in which recovery took place were mostly those in which antiphlogistic measures were adopted early." (P. 434).

Dr Alison's testimony is even more satisfactory, and is much more explicitly delivered. After remarking that "the prognosis is always to be regarded as doubtful, and in all the more complex and insidious cases, or in cases which are not *recognised* or *neglected in the commencement*, as very unfavourable," he says, "*many well-marked cases, however,* particularly

---

[*] Brit. and For. Med. Rev., vol. iii. p. 397.—Watson's Lectures on the Prac. of Physic, vol. i. p. 425.

[†] Path. and Prac. Researches on the Brain. 3d Edition.   [‡] Op. citat.

those in which the early symptoms are most distinct and characteristic, *subside completely under active depletion;* particularly full and repeated blood-letting and purging." (Outlines of Pathology and Practice of Medicine, p. 344.) And he expresses himself still more strongly in an article (of which he is understood to be the writer) in the third volume of the British and Foreign Medical Review; where, after commenting on Dr Abercrombie's description of the more frequent form of this disease, he remarks that " a good deal of experience has convinced us, that if this combination of symptoms is seen within the first two days, and met by full and repeated blood-letting (from the arm, if the patient is above three years of age) and free purging, *the greater number of such cases will do well."* What enhances the value of this remark is the distinct recognition which accompanies it of the whole circumstances necessary to be taken into account in judging of the cases spoken of. " It is very important to observe (says Dr Alison) that the blood drawn from the arm is very often both sizy and contracted, and easily distinguished from the blood of incipient fever, the crassamentum of which is comparatively flabby ;" and again, that " the convalescence is so rapid and complete as to indicate *unequivocally* that an inflammatory disease had been cut short." (P. 307.)

But perhaps the most remarkable testimony of any on this subject is that borne by the late Dr Maxwell* of Dumfries, who, according to his own statement, lost only one patient out of three in upwards of ninety cases. His practice was bold and hazardous in the extreme, consisting of blood-letting, and generally repeated blood-letting in the horizontal position, till the pulse could not be felt, and insensibility, lasting occasionally for some hours, was produced ; but " in upwards of ninety cases (to use his own words) that have been treated in this way, above sixty have recovered. In most of these I have had the assistance (he adds) of one or more medical gentlemen of this place." (P. 13.)

Had this testimony been more circumstantially given, it would be easier to judge of its precise value. Dr Maxwell, indeed, candidly allows the difficulty of determining how far the sixty cases that recovered were examples of hydrocephalus ; but he remarks, that as they " did in almost every symptom resemble those that terminated fatally, we may be allowed to infer that the disease in both was the same." (P. 14.) He does not, however, mention the period at which the successful cases were brought under treatment, nor does he say anything regarding the appearance of the blood drawn or the rapidity of the recovery—important elements in judging of the probable nature of the cases. Still, considering the importance of the criterion stated by him as the ground of his opinion ; his extensive opportunities of acquainting himself with this class of cases, as is obvious from his observation, not so much of the successful ones, but of twenty-seven fatal cases after his adoption of his peculiar plan of treatment, and of twenty-five other fatal cases previously ; and considering also his indirect appeal to his professional brethren for the accuracy of his observations, and the correctness of his statements,—I think it were unreasonable not to allow that a large proportion of the patients that recovered had been really affected with hydrocephalus.

An important qualification of these general statements is made by Dr Abercrombie, and acquiesced in by all practical writers, viz., " that the more the cases approach to the character of active inflammation, our pros-

---

pect of cutting them short will be the greater ; and that the more they partake of the low scrofulous inflammation, it will be the less." (P. 145.) In regard to these last, however, it is to be observed that the symptoms are very often, perhaps very generally, obscure ; and Dr Alison makes this important practical observation regarding them, that " in many such cases the main remedy, viz. blood-letting, is ineffectual, only because the disease is not recognised, at least with such confidence as to secure its energetic employment in the early stage " (Brit. and For. Med. Rev., p. 308),—an observation which, if correct, enhances the importance of another made by Dr Watson, that " we are bound to act, in some instances, upon very slight indications ; as when, for example, we perceive what we think threatenings of acute hydrocephalus in a scrofulous child, or in a child belonging to a family in which others have already been cut off by that disorder." (Op. citat., p. 428.)

Such is the testimony borne by the writers now quoted to the ready curability of the acute hydrocephalus in its earliest stage under active treatment. Their evidence is, I humbly submit, quite satisfactory, at least in a practical point of view. It may be insufficient to prove absolutely the truth of the proposition that the disease is thus curable, or even that it is curable at all ; but such kind of proof is not available to us, and in this point of view the question at issue can never be affirmatively determined. The necessities of practice, however, imperatively demand an affirmative solution of the question, if possible, and require us to be satisfied with evidence far short of *demonstrative*. Allowing, then, that the evidence adduced has no higher character than probability, I contend, nevertheless, that it amounts to probability of a very strong kind, and that, relying on it, and in reference to the practical object for which it is adduced, we may confidently affirm of the acute hydrocephalus, that in its more active form, and in its earliest stage, it is readily amenable to active treatment.

At all events, it is perfectly clear that the inference now drawn from it is not in the least affected by any amount of experience of the mortality from this disease, which has been coextensive with a *feeble and undecided plan of treatment in its earliest stage ;* and that the conviction of its incurability (whether absolute or comparative), in so far as it is founded on such experience, is positively fallacious. Such experience is indeed valuable, as showing the fatal tendency of the disease when left to itself or inadequately treated, but is of no value as bearing on the question, whether under proper treatment it may not, within the particular period specified, be equally amenable to remedies as any other acute inflammatory disorder. And it may be, in point of fact (I hope it is not), the general experience of the profession, that of those affected with hydrocephalus, and seen even from the commencement, many more die of it than recover,—nay, that the far greater part perish ; but it does not therefore follow that such must needs be the case.

I say it does not follow that such must needs be the case. The fact may be so, but the inference from it this—not that the disease is incurable, but that the proper remedies are not employed, or that they are too long deferred, or, if used early, that they are not carried sufficiently far. " There is too much reason to apprehend (says Dr Joy[*]), that many children have fallen victims, not so much to the incurable nature of their case, as to the indecision of their medical attendant." To the same purpose

---

[*] Cyc. of Pract. Med. (art. Hydrocephalus), vol. ii. p. 467.

are the following remarks of Dr Cheyne:*—"Every disease, whose tendency is to destroy a vital organ, becomes in unskilful hands an incurable disease. Thus, for example, croup may be considered incurable.   * * *.   When we dally with that disease in its first stage, not one in twenty will recover; whereas, if the treatment in the first stage be judicious, there will not be one death in twenty, nor perhaps in a hundred.   It is not long since physicians were more ignorant of the nature of croup than they are now of hydrocephalus; the day is perhaps not distant when, better understanding the nature and import of its early symptoms, hydrocephalus also may lose much of its danger.   In this inquiry some progress has already been made."   We often, indeed, take immoderate credit to ourselves for curing our patients, when in truth their recovery has been owing to the natural tendency of their disorder to a favourable termination, and may even have taken place in spite of measures directly calculated to defeat that tendency. But it is worth while considering whether, when they die, we do not oftener than is really just ascribe their death to an *inevitable* tendency in the disease to a fatal result,—a tendency which may have been quite real and very strong, but so far from inevitable that it might have been obviated by us.   And what if this mistake is not seldom committed in fatal cases of hydrocephalus?   The question deserves, at least once for all, to be seriously put to himself, and deliberately considered and answered, by every one.

If, after all, the evidence now brought forward shall appear to any to be unsatisfactory, I would just urge upon their attentive consideration, that there is a very great practical difference between a *full satisfaction of the truth* of the proposition advanced on the faith of it, and *a satisfaction of the contrary.*   The middle state of mind between the two consists in a serious apprehension that it may be true, joined with a doubt whether it is so.   And this, upon the best judgment I am able to form, is as far towards speculative disbelief of it as any one can at all be supposed to go, who has in any tolerable measure considered the evidence now laid before him.   Now, a serious apprehension that it *may* be true that the acute hydrocephalus is as curable as has been represented, lays us under the strictest obligations of a serious regard to it,—a regard the same, or in many respects nearly the same, with what a full conviction of its truth would lay us under.†

It will not, I hope, be inferred from any thing now stated, that I entertain such an extravagant notion of the curability of the more acute form of hydrocephalus in its earliest stage, as to imagine that every case of it brought under treatment at that period may be saved.   But there is a great practical difference between saving sixty out of ninety cases, as Dr Maxwell thought he did, and losing sixty out of ninety,—nay, between saving the majority of such cases and losing the majority of them.   That a majority of them at least may be saved, I have no hesitation in avowing my belief.   And if I have succeeded in convincing any one of this, who before was otherwise persuaded, and in inducing him to resolve on treating such cases, when he meets with them, with *promptitude, decision, and energy,* the object of this paper will be answered.

II. The practical value of the conclusion arrived at in regard to the

---

* Essays on Hydrocephalus Acutus, 2d Edition, p. 53.
† Butler's Analogy, part ii. conclusion.

curability of the acute hydrocephalus turns entirely on the practicability of making out the diagnosis of the disease in its earliest stage.

In judging of the question how far this is practicable in the generality of cases, it is necessary to consider, in the first instance, on what grounds we are entitled in any case at its outset to infer the existence of the disease. Now, it is sufficiently clear from experience, that this is to be done not by trusting to pathognomonics of any kind, but simply by attention to a certain combination and succession of symptoms, and to the nature and import of certain symptoms which have been observed to attend the commencement of cases which have ended in fatal hydrocephalus.

But these symptoms, it is to be observed, form a part only, and that a small part, of those which constitute the whole phenomena and the nosological definition of the disease; and the same or similar symptoms have often been observed to attend the early stage of other cases which have turned out not to be hydrocephalus. At this period, therefore, we obviously cannot pronounce so confidently on the nature of a case, as we may be able to do on its reaching even the stage next in advance, when other symptoms may exist more distinctly indicative of affection of the functions of the brain, or as we may be able to do on its favourable termination subsequently, under active treatment, without its ever having advanced to that stage, because, then, circumstances connected with its manner of termination, and the effect of the remedies employed, must have occurred, and will be available to us in judging of what its nature was.

Nevertheless, slender as may be the grounds of our diagnosis at the outset of a case, the observation of a set of symptoms exactly similar to those known to attend the early stage of hydrocephalus, is sufficient, in a practical view, to justify our regarding them as dependent on that disease, and to demand the remedies for it. It is of no consequence that there is an equal or even a greater chance of their being dependent on a different kind of morbid action, not requiring such remedies, unless it can be shown, which I apprehend it cannot, that any injurious effects that might accrue from the unnecessary employment of those remedies would outweigh the risk of life incurred from their being delayed or declined should the case really be of the nature of hydrocephalus. And to *wait* till the progress of the case shall throw farther light on the nature of the symptoms, may be, and in a genuine case of hydrocephalus would probably be, to wait till such elucidation of them could be of no practical value.

It cannot, therefore, in my judgment, be too strongly impressed on our minds, in reference to this class of cases, " that certain symptoms, and sets of symptoms, are often invested with a practical importance hardly inferior to genera of disease, demanding and justifying the use of remedies in many cases where it is still uncertain of what disease they form a part;—although, in all cases, it is of the utmost importance to obtain this knowledge as soon as possible, in order to understand the danger that is impending, and to acquire confidence in the remedies that are truly indicated."*

But, in truth, I apprehend that in very many, if not the greater part, of the more acute cases of hydrocephalus, the diagnosis during the early

---

* Brit. and For. Med. Rev., vol. iii. p. 303.

stage is not an affair of such difficulty as the foregoing reasoning may seem to indicate. "The diagnosis (says Dr Watson*) is really not so difficult as it has sometimes been represented." It may be that the phenomena of the disease have not been more accurately observed of late years than they were formerly; but I am persuaded that, since the pathology of it has come to be better known, the nature and import of the symptoms, and their relative value and importance, have also come to be better understood, and that we are now in a position to interpret them more accurately than our predecessors were forty or fifty years ago.

In reference to this, I may recall attention to the practical importance attached by Dr Cheyne to an inquiry into the nature and import of the early symptoms, and to his statements, made in 1819, that "in this inquiry some progress has already been made;" and I think it may be confidently asserted that Dr Cheyne's own investigations, and the previous and subsequent ones of other practical physicians, and particularly of Dr Abercrombie, have tended greatly to accomplish the objects of that inquiry, and have gone far in enabling us to fix more confidently than before on the diagnostics by which this disease is to be recognised in its first stage, and discriminated from others for which it is liable to be mistaken.

It is true that there is considerable variety in the early symptoms of not a few cases of this disease, corresponding to a certain extent, though far from generally, to real differences in the character and perhaps in the seat of the inflammatory action with which they are connected; and Dr Abercrombie has rendered a real service to practical medicine by accurately describing and arranging those varieties, and thereby facilitating their diagnosis; but there is a large number of cases, of more frequent occurrence too than any others, and more acute and tractable in their character, which are attended by a tolerably definite, and uniform, and well-marked concourse of symptoms.

These symptoms are—sharp, shooting, or remitting pains of head, impatience of light and sound, sickness and vomiting from slight causes, with great aggravation of the uneasy feelings on assuming the erect posture, and fever of various degree, but without the usual general oppression or depression of idiopathic fever, or of the contagious exanthemata. The pulse is firm, often peculiarly sharp, but seldom very frequent, and in some cases almost from the beginning it is slower than natural. In very many cases the bowels are remarkably costive and obstinate.† Of these symptoms, perhaps the most important are the sharp shooting pains of head and the vomiting from slight causes, with the aggravation of both on assuming the erect posture. The former are well described by Dr Alison‡ as being "often marked by occasional *twinges* or *stounds* of *peculiar intensity*, causing the patient to scream out; and the vomiting as extending to all, or almost all, the ingesta."

And these two symptoms have of late years derived peculiar significancy and importance as indicative of the incipient stage of hydrocephalus,—the former in consequence of its being now clearly ascertained that the morbid action constituting that disease is of the nature of inflammation, of which, as occurring in internal organs, pain is a very important symptom; and the

---

* Op. citat. p. 420.

† Alison's Outlines of Path. and Pr. of Med., p. 338. Cullen's First Lines, ed. by Cullen and Gregory, vol. ii. p. 323.

‡ Brit. and For. Med. Rev., vol. iii. p. 307.

latter, as being now known to physiologists to be an affection, not of the sto-
mach (and therefore not necessarily connected with disorder of that viscus),
but of various muscles, excited, through the spinal cord, by a reflex or
sympathetic action, originating probably in the medulla oblongata, and
remarkably liable to be excited by physical changes in the brain itself.

Of the two symptoms mentioned as the most important, the pain is ob-
viously the more important ; and when existing singly, and having the
peculiar character above stated, is sufficient of itself to excite suspicion of
the presence of the disease, and to warrant the remedies for it. The vomit-
ing is sometimes less observable, or is even wanting ; but it will not seldom
be observed in this case, that medicines given by the mouth produce a greater
degree of nausea than usually accompanies their exhibition, and very often
actual and repeated vomiting. And, lastly, in many cases, whether the
symptoms be well marked or obscure, additional value is given to them,—
negatively by the absence of circumstances which indicate their dependence
on some other kind of diseased action, and *positively* by the known tendency
of the patient to hydrocephalus.

In concluding this inquiry, I may be allowed to express a hope that no
one will so far misapprehend the scope of my argument as to suppose that,
irrespective of circumstances, I would set down as being of the nature of
hydrocephalus every case attended with ' a pain in the head,' or even with
more of the symptoms met with in cases of undoubted hydrocephalus, and
subject it to the active treatment which that disease requires. But I sub-
mit that this is not the error we are wont to commit, and that the caution
we stand in need of lies all the other way.

ABERDEEN, 11*th June* 1844.

Part II.—REVIEWS.

*Thoughts on the Mental Functions ; being an Attempt to treat Metaphysics as
a Branch of the Physiology of the Nervous System.* Part I. Edinburgh.
1843.

To medical readers no apology can be necessary for indulging in a few re-
flections suggested by a work on the mental functions. Not only do the
mental functions belong most strictly to physiology ; but there is to be
derived, from a practical acquaintance with the laws of mental operation,
the greatest assistance in the daily practice of medicine, even when that is
not particularly directed to mental diseases. And we have often regretted
that books on this subject are so seldom presented to us otherwise than
under so forbidding an aspect as to deter most men engaged in the active
business of life from attempting to understand their obscurities.

There are, however, one or two exceptions to this complaint. Dr Aber-
crombie's work on the Intellectual Powers is one of the few which puts on
an attractive form. And we can call to mind two other works which,
though somewhat severe on the attention, are free from the overwhelming
load of authorities and counter-authorities, disputations and counter-dispu-
tations of established usage in such writings, we mean Dugald Stewart's
Outlines of Moral Philosophy and Isaac Taylor's Elements of Thought.

The work placed at the head of this article is not a popular exposition

of the old metaphysics, but an attempt to direct the cultivation of that subject into new channels. It is anonymous, which is rather a disadvantage to a book on a subject which requires not mere reading but laborious study before it can be pronounced upon. It is a small volume, of between two and three hundred pages, and is but a portion of the work, being entitled Part First. The titles of the chapters, eight in number, will show the topics of which the volume treats:—On the analysis of phenomena; on mental analysis; on association, with a note on secretion; on sensation and volition, including the sensi-motor phenomena that constitute the optic tangi-motor system, with a note on the cerebellum, spinal cord, and medulla oblongata; on hearing and the voice, including the sensi-motor phenomena that constitute the auditory vocal-motor system; on sympathy and expression; on the faculty of enumeration; and on the craniology of Dr Gall. There is, besides, an appendix on the physiology of the nervous system, a note on molecularity, an essay on the physical constitution of gaseous fluids, and a theory of heat.

After this enumeration of our author's topics, what will most surprise our readers is, that it appears from several scattered expressions that he is not of the medical profession. Of his intimate acquaintance with the principles of certain parts of physiology a very cursory inspection of the volume is sufficient to convince us. Yet we dare not promise to subscribe to all the views he takes of physiological topics, and to all the uses he makes of them in his reasonings. Of one thing we are sure, he is a profound thinker, and as far as we have observed in the portion of his work hitherto published, for the most part an exact and sound thinker; and, though we fear we differ from him widely in many important views, we promise to ourselves much food for reflection by an occasional recurrence to his pages.

Profound as the work undoubtedly is, it is not equally clear. We could almost suspect the author of being studiously obscure, did we not know how easy it is for one to fall into the error of regarding what is clear to himself as necessarily obvious to all the world. Moreover, we know that to obtain the praise of clearness in writing we must confine ourselves to topics which are not obscure. This for the most part in metaphysics is impossible. It is not of ambiguity we complain—there is nothing of a choice between two interpretations; it is of a total blank of meaning, till we have mastered the whole spirit of his discourse on the topic in hand.

We proceed, then, to the particular examination of the work, while we apply to it, as we trust with due forbearance, those principles which we firmly believe to be the essence of metaphysical truth.

The plan on which our author treats his subject we consider to be rather deductive than inductive; that is, he does not attempt to reduce the ascertained mental phenomena to a small number of general laws, but assuming certain general facts in the physiology of the nervous system to be established, he endeavours to deduce from these the conditions under which mental phenomena take place. That this is the scope of the work may not at first sight appear to the reader, because, not to speak of the shadows thrown over the general plan by the numerous incidental illustrations from facts, analogies, and inferences in the progress of the work, he has nowhere collected into one view the principles from which he has made his deductions, but brings them out one by one no oftener than he has occasion to reason from each.

The following few passages will indicate the turn of his speculations on the subject of scientific investigation in general, when organic nature is

concerned :—" Analysis, in respect to phenomena, may be defined as the reduction of particular appearances into the more simple and general, and as classifying them according to their natural order of dependence or relation. If we seek to discover what are the essentials of all phenomena, we shall find that there can be no appearance, phenomena, or perception, without matter in a state of activity. Matter and motion may thus be viewed as the elements of which all things are composed ; and the difference between phenomena, as limited to a modification of the properties of these elements. One phenomenon can differ from another only in so far as the essential properties of matter and motion admit of change in kind or degree."—Again, after some explanatory sentences, he says :—" The analysis of phenomena has therefore reached its extreme limit, when it has resolved them into specific variations, in kind and degree, of the essential distinguishing properties of matter and motion. The term analysis is therefore inapplicable to those essential properties. To extend causation to their existence is in fact absurd, yet it is an absurdity which is generally overlooked. Our sympathies extend to a final or first cause ; but the conviction of this existence which is implanted in the human mind—the most enlightened as well as the most illiterate—is due to feeling, not to strict causation."—Further on in the same chapter he says :— " The mental organism which analyzes, views every thing indiscriminately that presents itself to our senses or imagination as the acted upon ; the agent is thus for ever sought, and when found, is instantly viewed in its turn as the acted upon. The faculty seeks only to become acquainted with *prior action ;* not matter alone, but matter having velocity ; which is synonymous with motion, force, energy, and is implied in the use of the active verb. The abortive longing for the cause of abstract existence does not seem incongruous, nor does the possibility of the creation of matter out of nothing." Pp. 2, 3, 6, 7.

In the notes on the physiology of the nervous system, our author has entered into particular details rather than marked out the great principles on which, as he says in his preface, his views are founded :—" The following attempt to study metaphysics as a branch of the physiology of the nervous system, is based on the great discoveries in this department of science that have distinguished the present age. The division of the nerves into motor and sensitive involves a principle that is all-important in tracing the primary relations of the mental phenomena. Combined with association, it seems capable of resolving those difficulties in the doctrines of sensation which Dr Reid has so ably pointed out in his " Inquiry," and which are certainly among the most formidable that beset the subject. The organology of Dr Gall is another splendid contribution to psychical science, the offspring of the highest genius ; but, from being too hastily reduced to the popular standard, its value has been unfortunately obscured. The usefulness of phrenology in drawing attention to the dependence of the moral on the physical has perhaps more than compensated for its crudeness as a science." Preface.

What we must regard, then, as the physiological principles on which this work, as a deductive inquiry, is founded, are such leading facts as the following :—That different nerves have originally distinct offices, as of conveying impressions from the peripheral parts of the body to the nervous centre, and of transmitting motor influence from the nervous centre to the peripheral parts ; that the several component parts of the nervous centre are endowed with functions from the first separate, and that those several

component parts, or many of them, so communicate by nervous bands, that the impressions made on one part are capable of originating changes in the other connected parts, and *vice versa*. Besides, it is manifest that his system rests on the belief that during every state of consciousness there must arise a change in some part of the material organism. We nowhere find him directly affirming that such a change in the organism is all that constitutes a mental operation ; though his frequent use of the ambiguous phrase "mental organism," might lead the reader to suppose that his system is wholly a system of materialism. We object to the phrase mental organism as unscientific, and think that another expression which he uses, namely, mental economy, should everywhere be substituted for it.

Among our author's general principles we must refer also to the transmission to the offspring of qualities acquired by the parent. Of this in the lower animals it is impossible to doubt, nor even in man, yet in his case within much narrower limits. The instances to which our author more particularly points are those recorded by Mr Knight as having been observed to occur in certain breeds of spaniels.

These must suffice as specimens of our author's general principles ; for we have not leisure to search for more of them in the scattered pages in which they may occur. But before entering on the consideration of the particular deductions which he makes by the help of these and similar general principles, we must beg permission to state how far in our opinion it is legitimate to rest a system of mental philosophy exclusively on such a basis.

We believe with our author, not because it is proved directly, but because it rests on the strongest and closest analogies, that every act of consciousness, that is, every mental operation, is accompanied with a change in the material organism of the nervous system. In one sense, then, we agree with him that " one phenomenon can differ from another only in so far as the essential properties of matter and motion admit of change in kind or degree." But our author, we suppose, limits the term phenomena to material substance and motions observed ; but we use the term phenomena in a larger sense, and include under it states of action which are neither matter nor motion—which are discovered without the assistance of the senses, being themselves states of consciousness,—(the me)—and the discovering agent—(the I)—being also a state of consciousness.

In short, to say without limitation that matter and motion are the elements out of which all things are composed, is a flagrant begging of a most momentous question, by which it is in effect affirmed that mental operations are nothing but matter and motion.

Our author, in reply, would perhaps suggest the last paragraph of his first chapter : " It is to be feared, that if the mind is not fully impressed with the imperious necessity of applying this physical standard to all phenomena, whether moral or physical,—if the conviction is not matured and wholly derived from that experimental induction which has revealed the primary and most simple relations of matter and motion,—it is in vain to expect that philosophy will progress towards truth."

We answer—by all means go on studying the machinery concerned in the mental operations ; but do not confound the mere machinery with the power —do not deceive yourself into the belief that you have discovered the moving force whenever you have hit on some before unnoticed combination of wheels and levers.

It is a striking fact in the history of man's waywardness, that no sooner is the long-cherished delusion in mechanics—the foundation of the search

after the perpetual motion—namely, the belief that machinery can generate power, banished from the popular mind, than straightway even men of science are found to take up the spirit of the same delusion in what concerns mind, and to insist on all followers of nature, on pain of being branded as behind the age, believing that no power is operative in the phenomena of mind, because some progress has been made in detecting the connexions between the several parts of the machinery by which the effective power is applied.

We know that the argument urged against this view is, that it is not in accordance with the rules of inductive science to receive anything as truth which does not rest on observation. But we are prepared to maintain that, though the science of mind, when based upon reflection on the subjects of consciousness, may be technically excluded from inductive science, yet that it in no respect fails to answer to the spirit of inductive science,—which spirit is, to apply to subjects of research the mode of investigation suited to the nature of each, not in accordance with such fictitious rules of philosophy as kept men in darkness for ages, but in strict conformity to those precepts of common judgment by which a great part of our race has risen from a savage to a civilized state of existence.

While, then, we admit in the fullest manner the study of the structure and functions of the nervous system, in so far as the observation of the attendant changes of matter and motion is concerned, to be of a high value for the advancement of the science of mind, we must insist that there are other and higher modes by which it can be cultivated—modes which reach the actual phases of the mental power itself, and not the mere operations of the material machinery through which the power acts and is acted on.

The faults committed in the cultivation of metaphysics on the old plan, are not proofs of the inadequacy of that plan under better regulation. We should expect much advancement from the cultivation of mental science on its old basis, but with such aids as the lights of modern physiology can supply. The science is still hung round with some scholastic lumber. We look upon debates as to the existence of an external world, and the evidence of personal identity, as little better than such questions, as " how many angels can dance on the point of a needle ?" or " whether is an angle an affection of space or a property of matter ?"

No man on this side of insanity ever really doubted of the existence of an external world or of his own personal identity ; and to attempt to prove what is intuitive or what became part and parcel of our nature at a period of infancy which memory cannot reach, is akin to nothing so much as to the exploded delusion before referred to, which sought to create impulsive power by combinations of wheels and levers.

The great defect of the old metaphysics is the neglect of the study of the varieties of individual intellectual character. In this respect phrenology has a manifest advantage. But in the phrenological collection of so-called facts, it is so difficult to separate the chaff from the grain, that it is doubtful if any use can be made of them towards the improvement of metaphysics.

The study of individual intellectual character implies, besides self-observation, remark on mental operations in others ; and physiology already affords a basis for this kind of study in the variations of intellectual and moral character, observed from the earliest times in connexion with those slight structural differences of form with the predominance of certain functions, which are known as temperaments.

If any doubt should arise as to the practicability of carrying the study of the varieties of intellectual character to such an extent as to be of use in the medical profession, we would refer to Hoffbauer's[*] work, of which Dr Pritchard has made great use in his treatise on insanity, and in particular to his distinction between stupidity (dummheit) and silliness (blodsinn), both defective states of mind ; the first being attended with an unusual obstinacy, the other with an equally remarkable facility of disposition.

We cannot take time at present to illustrate this interesting topic ; but we have no doubt that it will be found, in many instances as well as in those just cited, that certain prominent qualities of mind necessarily imply other concomitant qualities, and that the discovery of the presence of one may be made the means of inferring the presence of others, which is manifestly the same thing as obtaining the command of a general law. We have but space to add what we think an *a fortiori* confirmation of our position, because it has reference merely to a command over one kind of muscular action. We refer to the undeniable dependence of the character of the handwriting on the temperament when that is at all well marked. And this dependence, we are very sure, is the foundation of the power which some practise, with no small success, of pronouncing on a person's character from his handwriting, though we believe that many have learned the secret empirically, without understanding the grounds on which their success rests.

We would just hint at one or two other modes by which the science of mind might be augmented. Thus, what can be more instructive in this department than the consideration of the steps of self-education through which every infant must pass, before the communication of knowledge through the medium of language begins ; or than the study of those steps by which the human faculties rise, as the objects on which they are exercised grow in extent and importance, while man advances from the humblest condition in which he is known on earth to such an intellectual superiority as Europe at present enjoys. In illustration of the advantage to be derived from the former method, we think we could show, did our limits permit, that the infant at the mother's breast acquires the idea of an external world, not by such arguments as metaphysicians use, but by uniformly discovering a double consciousness, or one in each of two parts, when his hand touches any part of his own body, while his consciousness is as uniformly single, when he touches his mother's breast, or any other external body.

Besides these sources of improvement, we have no doubt that the knowledge of the state of the psychological functions in the lower animals is destined to throw much light on the operations of the human mind.

With these limitations on the exclusive plan which our author adopts for the cultivation of the science of mind, we proceed to notice shortly some of his particular views.

We take the following as the first specimen :—

" Impressions act upon the organisms of the propensities by means of and through the perceptive faculties. There must therefore be a class of conductors between the perceptive organs and the propensities. The influence which they transmit is probably similar to that conveyed through the motor nerves ; and if we carry out this comparison, each filament is

---

[*] Hoffbauer, Médecine Légale, &c., ou les lois appliquées aux Désordres de l'Intelligence. Traduit par Chambeyron.

probably a conductor of this influence, and isolated from those adjacent. A very large proportion of the cerebral mass is probably composed of such conducting filaments." P. 27.

Again : " Memory—the power which a mental organism appears to have of retaining ideas corresponding to previous impressions from external objects. The idea bears no comparison with the impression in point of vivid distinctness, yet it is the true representation of it in all its qualities of form, magnitude, colour, &c. If it is the same organic substance that retains an impress of all those faint images with which the mind is stored, how is it that they are not confused by interference ? It is evident, from what has been suggested above, that the impression from without, assisted by a power from within, effects a change of some kind in the organic structure.

" The sexual passion is excited by the personal appearances of the opposite sex ; hence we may conclude, generally, that the change which takes place in the organic structure, corresponding to such impressions, influences personal demeanour and action, and irritates the elements of specific action. We may thus adopt, as an approximate deduction, that perception is a certain change in organic structure, accompanied with an irritative influence over certain specific elements of action, and that these may exist either in a latent or active condition." P. 21.

Again : " The grand principles of association are *simultaneousness* and *similarity*. The agitation caused by an idea or impression lasts for a perceptible instant ; and while another contiguous one is acting, the latter part of the first may be simultaneous with the first of the second. Similarity ought not perhaps to be reckoned an original quality of association ; because, when two impressions are similar, but not identical in all their parts, the comparison and recognition of the similarity are distinguished by their respective simultaneous parts being associated, and marking their difference in all particulars. It does not require any specific principle of association to cause like impressions to excite like feelings or ideas. That the mind should run from one train of thought to another, both having a common point of resemblance, is accounted for at once by the principle of simultaneousness, if we reflect that the point of resemblance is actually an element of thought identical in both ; and when it is excited in the first train, the principle of simultaneousness is awakened in the second. It is therefore active in both, and will carry the mind in the direction where the ideas have been most vividly impressed." P. 24.

Again : " The two prominent points of the mental economy thus appear to be, *perceptive consciousness* and *directive effort*. The passions, or organisms of the propensities, are the great sources of activity, which are acted upon by the former, and act upon the latter.

" In motor association, the effort is simultaneous with the degree and direction of the preceding muscular exertion. Is not a similar conjunction of phenomena necessary in all cases of association ? And may it not be defined, as the simultaneousness of an influence that proceeds from the seat of consciousness with another that arrives at it ? " P. 28.

Our author's analysis of volition (chap. iv.) amounts to this—that " two impressions must be engaged in the internal action—viz. 1st, of the part of the body to be moved ; and, 2d, that of the place to which it is to be moved. The action in the brain or nervous system to which the motion of the body conforms, is moving the first of these impressions to coincide with the latter." We cannot afford space to follow him in the long inquiry next entered on to show the nature of what he terms tangi-motor and optic-motor percep-

tions in reference to our power of adapting muscular movements to the distance and direction of objects. His tangi-motor perceptions are the impressions of consciousness transmitted from the skin without the contact of external objects, and which carry along with them the sense of position (p. 55.) His optic-motor perceptions are the perceptions of the visual figure of the body, associated with these tangi-motor perceptions. On this point we are not more satisfied with our author's account than he is with that of Sir Charles Bell. We do not feel the difficulty here so strongly as our author, and that perhaps because we have been accustomed to consider the surface of the body, at all times affected by warmth, tension, and other impressions, as in an especial manner the seat of consciousness, owing to that great law of sensation by which the states of consciousness originating in the impressions made on the extremities of nerves are referred back to the points at which the impressions were made. It is thus that the infant at the mother's breast acquires a knowledge of the form and dimensions of its body. The difficulty then, as it appears to us, does not lie in the attainment of a knowledge of the present attitude of the body, nor in the conception of the attitude which is to be assumed, but in the explanation of the nature of that power by which man becomes able so to command his muscles as to change one attitude into an ever-varying succession of different attitudes. Facility in this case belongs only to acts compounded of those to which he has become accustomed. And the difficulty is not merely to discover what muscular volition is, but what is the nature of those almost painful efforts by which one at length learns to write, to fence, to swim, to skate. We are inclined to believe that man has no power by volition over any muscle or set of muscles, till an impression, originating in the contraction of that muscle or set of muscles, has reached the nervous centre through the nerves, the contraction in this first instance being determined by such non-voluntary forces as fall under the head of instinct or reflex action. Under this view, the power over the muscles of locomotion, and we may add of voice, originates in the same law by which the evacuation of the bladder and rectum, at first automatic, becomes voluntary.

Our author continues the same subject in a note on the cerebellum, spinal cord, and medulla oblongata. " The remarkable experiments of M. Flourens have demonstrated, that the cerebellum is an organism interposed between volition and the corresponding motions of the body ; and it is generally believed to form the connexions necessary for executing combined movements. Do the preceding views throw any light on its functions ? or does the necessity of such an organism tend to confirm the preceding hypotheses, and extend our acquaintance with the economy of the nervous system ? Does it organize that association between the tangi-motor and optic-motor systems which puts us at all times in harmony with the position of external objects, and which has ever been so great a mystery in abstract physiology ?

" The simplest effort of volition involves the active state of two impressions of which we are conscious ; but it manifestly involves the active state of a vast number of associated motor elements of which we are *not* conscious. Is the cerebellum the mechanism that translates the simple cerebral or conscious phenomena of volition into the complex phenomena of muscular action, and that eliminates, from the state of the sensitive nerves of the muscles and of the skin, the optic perception of position which is associated with the peripheral consciousness ?" Pp. 74, 75.

The cerebellum appears to be the depository of those impressions derived

by the nervous centre from the muscles during their contractions, the continued existence of which, whether as remembered sensations or states of consciousness, or in some less distinct form, rudimentary of sensations, in a rudimentary memory, appears to be essential to the continued voluntary power over the before-subjected parts of the muscular system.

Our author enters into some very ingenious views on this subject. We thus interpret his meaning : When a movement is about to take place, there is a consciousness of the actual position of the body through the sensitive nerves of the skin, and what we shall call a conception of the intended new position (dependent according to him on the optic nerves), and these two states of consciousness belong to the cerebrum—to the cerebrum it also belongs to will the change ; the impression made on the organism of the cerebrum by this act of will, must be conveyed to the cerebellum by communicating nervous fibres ; the cerebellum is the depository of those impressions made during the previous contractions of muscles of which there is no consciousness, but the continued existence of which is necessary for the repetition of such acts ; the impression made by the act of will on the cerebellum, through the communicating fibres, brings these stored-up impressions into activity in so far as required, and thus the fiat of the will is through motor nerves transformed into a change of attitude. This process is illustrated by a diagram.

The vocal-motor perceptions spoken of under the head of hearing and the voice, are quite analogous to the tangi-motor and optic-motor perceptions before made use of. In short, we fear that our author has merely produced, in this consent between organs of sense and organs of motion, a kind of hybrid between the old idea of sympathy between nerves and the more correct modern idea, which makes sympathies to take place through the nervous centre.

His chapter on sympathy and expression immediately follows. We extract the following passage :—

" To analyze the sympathetic connexion which expression of countenance, tone, and gesture establish, it is necessary to examine minutely every link of the chain of phenomena. First the mental excitement has a condition of the brain to correspond with it. The brain is excited in a certain specific way. The respiratory facial nerve conveys the specific influence to the muscles of the face, which thus experience certain specific contractions. Now, although we cannot always command our features, or banish from them the influence of the facial nerve, *we are conscious at all times of the expression that they assume.* This is a singular fact, which will stand examination. The sensitive branches of the fifth cerebral nerve, distributed to the skin and muscles of the face, may be sufficient to convey an impression of the state of tension and pressure that affects it. But this is accompanied with a perception of the expression as it is pictured on the retina of an observer ; the same impress of expression, in short, is derived from common sensation, as by visual sensation when looking at the reflection of the face in a mirror." P. 118, 119.

The next chapter is on the faculty of enumeration. The only difficulty, as it appears to us, which falls under the head of the faculty of enumeration, is the origin of that uncommon power possessed by some persons in calculation. This we suppose our author is content to explain on phrenological grounds. We cannot admit the power of calculation to be of a character so special as to require an organ for itself. And we think the ordinary power of enumeration requires less explanation than almost any

other faculty with which man is gifted. It is one of the most elementary processes in the mental economy, and flows directly from the exercise of almost every faculty of the mind. We are inclined therefore to regard our author's explanation as machinery which cumbers the subject. Colour, and the various modifications of sound, are special perceptions as compared with number. We can understand the necessity for special development for special perceptions, and if the phrenological head were mapped out with the organs destined to special purposes only, we should be disposed to listen much more favourably to its pretensions. On this point of the want of specialness in the perception of number, we have one or two sentences to add as bearing on an important general view of the mental economy. On the simple power of recognising the differences of numbers, and of adding and subtracting the same, depends the whole science of computation ; and these simple elements of arithmetic are of so universal a character, that the exercise of them enters into innumerable mental processes. To recognise unity is to have the power of reckoning numbers ; to discover that many of our sensations are not continuous, but interrupted by intervals, is to have computed ; to acknowledge resemblances and differences among our sensations, is to appreciate the differences of number. No sooner was man able to perceive the resemblance between two fingers and two stars, than he had already apprehended the whole of the abstract idea of number.

It is on such grounds as these that we differ from our author, while we conclude that there cannot be any special organism for numbers, and that there is no need of any special theory to explain the operation of mind in regard to them.

Our author's next chapter turns on the organology of Gall ; a subject, which for the present we are desirous to avoid. And with regard to his physical speculations, appended to the volume, we feel that such subjects are not fitted for our pages, even if we were inclined to enter on the discussion of them. We therefore take leave of our author with the expression of our high respect for his talents, acuteness, and industry ; while we can truly say, that if our opposition to his views has grown more marked as we advanced in the examination of them, we have perceived at every step stronger and stronger proofs of the might of the adversary with whom we have entered on this, as we truly wish it to be, a friendly controversy.

Facts and Observations on the Sanitary State of Glasgow during the last Year ; with Statistical Tables of the late Epidemic, showing the Connexion existing between Poverty, Disease, and Crime. By ROBERT PERRY, *M.D., President of the Faculty of Physicians and Surgeons, Senior Physician to the Glasgow Royal Infirmary, &c.* 1844.

WE are sorry that circumstances prevented us from noticing the above little work of Dr Perry's in an earlier number,—a place which its merits certainly deserved. It contains not only many important facts and observations of the author upon the sanitary state of Glasgow for the last year, but also a numbers of reports made by the various surgeons of the districts of that city. It is particularly valuable, as it was then that Glasgow was visited by that peculiar epidemic which attacked all the large towns of Scotland about the same time, and which was principally characterized by bilious vomiting, jaundiced appearance of the skin, rheumatic pains, and relapse.

Dr Perry gives a very good account of the various symptoms, in nowise however differing from the descriptions previously given by others,* excepting perhaps that he mentions observing a day or two before the relapse a strong craving for food.

Our author considers it to have been an entirely different disease from typhus. " The circumstance of this disease attacking those who had formerly passed through eruptive typhus, and being followed by typhus when the patient was exposed to the infection of the latter, is sufficient to show that they are totally different diseases both in their character and causes ; as different as smallpox and scarlatina, or typhus and cholera."

He likewise disbelieves that a similar epidemic prevailed in this country in 1818. " It has been stated that a fever of a similar character to the present prevailed in this country in the year 1818 ; I have been not an inattentive observer for upwards of thirty years, and have never witnessed a similar disease in this city."

Speaking of its causes he observes :—" In looking over these reports (district surgeons'), one striking feature in the circumstances of the thousands who have suffered most from the present epidemic presents itself ; that is, the overcrowded state of their houses, families of six, eight, and ten individuals, crowded into one small apartment, without a bed to lie upon, if we except, perhaps, a quantity of long-used straw or filthy rags, emitting a stench of human impurity so offensive, that to one unaccustomed to it, is wholly insupportable, but to which the wretched inmates from habit appeared totally insensible ; those small apartments, being often let by the week, are filthy in the extreme."

It prevailed to a great extent in Glasgow. " The number of cases," remarks our author, " of the present epidemic, reported to the directors of the town's hospital, as attended by the district surgeons during the last eight months, commencing May 1843, amounted in round numbers to 14,000, as seen by the table. Of those occurring in Calton, Bridgeton, and Anderston districts, I have got no accurate return, but it is certainly within the mark to estimate it at 7000 ; those in the Gorbals and Tradeston districts at 2000 ; those treated in the Infirmary during the same period at 3000 ; those who were attended by private practitioners, not in the poor-roll, at 5500 ; and those treated in the Barony parish, in the suburbs, without the parliamentary boundary, at 500 ; making a total of cases of epidemic fever in Glasgow and suburbs, during the last eight months, from the beginning of May till 30th December, 32,000,—exhibiting a fearful amount of poverty and disease, as it affected the poorest and most destitute of the population. Great as it is, however, I have been assured by the various practitioners who have attended the poor, that the estimate is far too low."

The mortality which it occasioned was fortunately there as in other towns very low for the number attacked. " The returns from the Glasgow Royal Infirmary show a mortality from the fever of 5 per cent. The city district surgeons estimate theirs at 3 per cent. ; but from the table of the number of coffins given out by the town's hospital to the poor during the epidemic period, it is probable that there is some fallacy, as it is known all the poor on their roll do not apply for coffins, and that during the epidemic period there was a remarkable immunity from all other diseases. If we subtract 500 from 1346, it leaves 846, being more than the whole number

---

* For accounts of the symptoms of the late epidemic, see Scottish Medical Gazette, pp. 1, 129, 236, 321.

of coffins given out during the whole of the previous year, giving a proportion of mortality to the epidemic in the city of about 6 per cent. during the eight months of its prevalence ; but taking the whole at 5 per cent., the mortality will amount to 1500 as the result of the present epidemic during a period of eight months."

We cannot conclude this notice without saying how highly we estimate local reports of this kind, especially when executed with that care and industry which Dr Perry has bestowed upon his " Facts and Observations." We shall at all times be happy to give publicity to such in our pages.

The work is printed by patients at the Royal Lunatic Asylum, Glasgow, which accounts for some inaccuracies that cannot escape attention. It contains, however, a well-executed map of Glasgow, with the different districts more or less deeply coloured as the epidemic more or less prevailed in them.

Lecture on Physical and Intellectual Life. Delivered before the Educational Society of St Mary's, Birmingham. By SAMUEL WRIGHT, M.D., &c. London, 8vo, pp. 58.

DR WRIGHT is very favourably known to the profession by several valuable and interesting contributions to medicine. His papers on the Ergot of Rye, his Thesis on the Physiological Action of Mercury and its Chlorides, his Researches into the Pathology of the Salivary Secretions, and other interesting memoirs, have established his reputation as a most intelligent, industrious, and successful cultivator of medical science.

This lecture, as designed for a popular audience, brings him before us in another aspect, as the eloquent advocate of certain great general principles in physical and psychological science. The object for which it was designed has induced the author to deviate from that close and precise line of reasoning which the subject would in other circumstances require, and to render his style more elevated, both in the way of general reflections and language, than would otherwise have been suited to a metaphysical and physiological disquisition. Although rather florid to our taste, we have been highly pleased with the general bearing of the lecture. With the doctrines regarding materialism and immaterialism, vitality and spirituality, laid down by the author, we in many respects concur, and deem such a popular exposition of those doctrines to be of much practical utility. They are illustrated by many pleasing and interesting examples derived from poetry, and natural phenomena, chemical and vital.

The author has adopted the views advocated by Dr Pritchard in his work on the vital principle. He argues with the materialists, that *life* is the result of organization, a property of organized matter, and with the immaterialists, that *thought* is a property of an unknown principle, *superadded* to organized matter, which we call *mind, spirit,* or *soul,* an immortal and immaterial entity.

In regarding this entity, however, as the distinguishing feature between man and brutes, we conceive that he strikes at the root of the arguments upon which it is contended that thought cannot be a property of matter ;—for who can deny to the lower animals the possession of those qualities which distinguish mind ?

The whole argument may be comprised in a few words. All the phenomena of matter, organic and inorganic, may be referred to a few

general properties common to all matter. Even vital phenomena, he argues, are not different in *kind*, but only in modification, from the general properties of matter. The phenomena of mind, on the other hand, even in its simplest manifestations, are entirely different *in kind* from any of the known properties of matter, and cannot therefore be referred to the same cause. While the one set of properties, therefore, are ascribed to a certain unknown cause called *matter*, the other must, on the same principle, be referred to a different ens, which we call *mind*.

If this argument should appear to confer immortality on brutes as well as on man, the fault is with those who base the doctrine of the soul's immortality upon the proof of its immateriality, and not upon evidence of a much higher kind. It would be wrong, however, to judge hypercritically on a part of the subject which probably did not come within the design and scope of the author in the composition of a lecture for a popular audience.

As a whole, the lecture is alike creditable to the erudition and scientific attainments, to the head and heart, of the author.

———

On Dysmenorrhœa and other Uterine Affections in Connexion with Derangement of the Assimilating Functions. By EDWARD RIGBY, M.D., Lecturer on Midwifery, &c. 12mo, pp. 138. London, 1844.

THE volume before us is divided into two parts,—the first embraces the influence of assimilation on the circulating system ; and the second is devoted to the effects of mal-assimilation on certain uterine derangements. In his preface the author very modestly states that he hesitates to submit his observations to the profession, as his investigations have not been so perfect as he could wish. But notwithstanding this deficiency, as Dr Rigby informs us that he not only enjoys an extensive field for his inquiries, but that since 1831 he has devoted his attention to the subject under consideration, we have more than ordinary encouragement for noticing his exertions.

We regret, notwithstanding our favourable anticipations, to be obliged, in the very commencement of our strictures, to differ in opinion from the author, who states (preface, p. 1), that "these affections on the whole excite less interest among the generality of the profession than any other class of diseases." With the sentiments of the generality of our brethren south of the boundary we cannot pretend to be acquainted ; but some of them, we can state with confidence, do not participate any more than we do ourselves in the foregoing sentiments. We can well remember, that from the time we could pretend even to a very moderate share of practical knowledge of female diseases, individuals affected with dysmenorrhœa, more especially matrons, excited considerable solicitude, from this derangement being not only very difficult of removal, but being also almost invariably accompanied by sterility. Of this latter fact even females themselves are not ignorant ; for we presume that other members of the profession as well as ourselves have been consulted by mothers as to the propriety of young females contracting a matrimonial alliance while suffering from this variety of menstrual derangement. Moreover, if dysmenorrhœa has not sufficiently commanded the attention of some of our brethren, this must be ascribed to their having been but indifferently gifted with the power of observation, since it may unquestionably be followed by very distressing results. We have

long been of opinion—and our sentiments have been satisfactorily corroborated by Dr Lever in his excellent work on Organic Diseases of the Uterus, noticed in the first number of this Journal—that females who have been martyrs to painful menstruation are very liable, at an advanced period of life, to be the subjects of cancer uteri,—a fact which is nowhere noticed by the author of the work under review.

The first thirty-five pages of this work are occupied with a repetition of Dr Prout's sentiments regarding the influence of mal-assimilation. To enter on an analysis of these speculations would be inexpedient, since they have been for some time before the profession, and must be familiar to most of our readers. We shall merely content ourselves by making some observations on the causes of chlorosis and dysmenorrhœa, the most obstinate of the affections treated of by our author, who has not at all acquitted himself on this head so well as we were led to expect, considering the advantages he has enjoyed. If mal-assimilation from defective and improper nourishment were influential in producing these diseases, they ought to be very prevalent among the humbler classes, who are most exposed to such causes ; but that the reverse is the case, considering their numerical superiority, must be well known to all practical men. The circumstances most conducive to the affections referred to are originally feeble corporeal stamina, a strumous diathesis, long continued mental distress, a sedentary occupation, breathing an impure atmosphere, and a laborious employment ; and when combined with these, it is not improbable that the causes above noticed may exert considerable influence. What possible analogy Dr Rigby can find between dysmenorrhœa, gout, and rheumatism we are at a loss to discover, except that they are all attended with pain ; and upon the same principle we may erelong expect to be informed that dysmenorrhœa is allied to colic, toothache, and earache.

The next forty-five pages are devoted to the symptoms and treatment of dysmenorrhœa chiefly ; and, giving the author all due credit for his industry, we cannot help observing that there are some obvious contradictions in this portion of the work, and that the symptoms have, in some respects, been far too minutely described. For example, at p. 37, we are informed that there is heat, swelling, redness, and pain ; and at p. 43, that not unfrequently the canal is so exquisitely sensitive as to render the introduction of the finger very painful and sometimes even impossible. Again, at page 61, we are told that " the passage is too irritable and swollen to bear the introduction of an instrument." It has never fallen to our own lot to meet with cases attended with symptoms so violent ; and we are naturally led to ask the author how he can undertake to speak so confidently regarding the condition of the sexual canal, when neither a finger nor an instrument could be introduced for the purpose of exploration ?

As specimens of over minuteness in describing symptoms, we may notice the following : " There is a bilious headache across the forehead (p. 41) ; the labia and nymphæ are usually found swollen and flabby, and copiously moistened with a thick, creamy, albuminous discharge (p. 42) ; it is everywhere covered with the above-mentioned white or yellowish-white discharge (p. 43) ; the fæcal mass is ensheathed by the mucous secretion, and although formed, and even solid, glides from the intestine with that degree of ease," &c. ; and again, " a secretion of gas takes place in the vagina, and also in the rectum." Our readers will, like ourselves, be naturally curious to know what description of ladies could be so communicative to Dr Rigby. Such minute details might have been expected of a physician writing in

those times when our brethren were required not only to examine but even taste the urine and fæces of their patients; but in the present day we are sure no writer would incur the censure of a reviewer for dispensing with them.

The treatment pursued in the subjects embraced in this publication is, to say the least, judicious; but, in passing, we cannot avoid noticing a novel mode of using one of the preparations of opium recommended at p. 61, viz. " to apply to the vagina, by a camel's hair pencil, some almond oil with a little extract of poppy or liq. opii sedat. That in the present day the female organs are examined with a degree of freedom which, thirty years ago even, would not have been tolerated by the sex, and remedial measures adopted which it would have been hazardous in the extreme to propose to them, we are ready to admit; but we must reprobate such conduct in the strongest terms when the relief of the patient can otherwise be as efficiently accomplished.

The remainder of the work embraces some cases in illustration, and the modes of analyzing the urine, which, though as we believe founded on sound information, we shall leave our readers to consult for themselves, as we have already extended our observations beyond the limits usually appropriated to works of this magnitude.

PART III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

Doubts as to Kiernan's Views of the Structure of the Liver.

KIERNAN's observations upon the structure of the liver, and the relative positions of the component tissues of that organ, have been very generally believed by anatomists and physiologists of the highest authority to be correct.

Kiernan considers, as is now almost universally known, that he had from direct observation proved that the capillaries of the *vena portæ* communicate with the radicles of the hepatic veins; the latter being situated in the centre (the intralobular veins) of the acini or lobules of the liver; the former ramifying between and upon the surface of these bodies—the interlobular and lobular veins—and that the hepatic artery is the vessel that furnishes the supply of nutritious matter for the nourishment of the biliary canals, the arteries, veins, and the envelopes which isolate the acini from each other.

These statements are to a certain extent opposed to a series of observations contained in the fourth number of Müller's Archives for 1843, made by MM. Weber, Krukenberg, and Müller.

The objects which MM. Weber and Krukenberg have in view are to demonstrate the existence of vascular capillary reticulations, which are the last ramifications of the *vena portæ,* and the radicles of the hepatic veins; the meshes of which are occupied by the biliary canals, which, like them, also forms a complete network. These writers state, moreover, that the hepatic artery communicates *directly* either with the *vena portæ* or the capillary network, thus differing in reference to this latter point completely from the views entertained by Kiernan.

MM. Weber and Krukenberg deny the existence of acini. They believe that the liver consists of a continuous mass, in which the vessels and ducts, situated in distinct channels, are placed.

The smallest ramifications of the hepatic vein are distributed between those of the *vena portæ*, but at a sensible distance from each other; the space between them being filled up by cellular tissue, and by the commencement of the hepatic ducts.

M. Müller, however, supports the old opinion of the division of the liver into lobules or acini; and states, that if Weber and Krukenberg have not been able to see the cellular and fibrous tissues which envelop these, it is because the injection used has so distended the vessels as to obliterate by pressure the interlobular spaces. Müller states, that to exhibit the acini distinctly, it is merely required to macerate the liver in acetic acid for eight days or so. By this process the cellular tissue is destroyed, the lobules remaining suspended by the radicles of the hepatic veins. The terminations of the biliary ducts have not yet been observed by Müller, although this excellent observer has looked for them with the greatest possible assiduity and care. MM. Weber and Krukenberg state that they have succeeded in demonstrating the existence of a plexiform network formed by terminating branches of the biliary ducts, in the meshes of which the vascular capillaries are placed.—From *Müller's Archives*, No. iv. 1843.

SURGERY.

On Excision of the Head of the Femur. By Dr Ed. Bonino.

In the April number of the *Annales de la Chirurgie* there is a memoir on this operation by M. Bonino, and in the same journal for May he has published the history of two additional cases, the account of which he had received subsequently to the publication of his first paper. The cases which he has collected amount to twelve in all, and we shall append an abstract of them, as, with the exception of two of them, they are but little known in this country.

The first case which he relates is the one by Mr Whyte of the Westminster Hospital, who we believe was the first who actually performed this operation. On the Continent, surgeons appear to doubt that he actually performed the operation, believing that he limited himself to its proposal. That he did so, however, and with success, is well known in this country, as the case was published in the London Medical Gazette in 1832, and the parts removed are still preserved in one of the London museums. We find, likewise, that the case is alluded to with approbation by his colleague Mr Guthrie, in his clinical lecture, in the following terms:—
" Mr Whyte, my colleague in this hospital, removed the head and neck of the thigh bone in a young person, by a very simple operation, after it had been dislocated by the same disease, ulceration of the cartilages and head of the bone, because it was evidently causing great irritation. The patient was a boy aged fourteen years, and recovered, with a useful articulation, and without the limb being much shortened."

The second case which he gives is published in the *Gazette Médicale* for 1835, and occurred in the last expedition of the Russians against the Turks in 1829. The operation was performed by M. Oppenheim. The patient had been wounded by a ball in the left coxo-femoral articulation. On enlarging the wound, M. O. found that a comminuted fracture of the

head of the bone existed, and that a portion of the upper border of the cotyloid cavity had been detached. He removed the injured parts with some difficulty, and the case held out very fair prospects of success until the seventeenth day, when the man was much alarmed by the occurrence of a case of plague in the ward, and the same evening intense fever supervened, and he died next day.

The third case in which the operation was performed was by M. Sentin, at the siege of Antwerp in 1832, likewise for fracture by gun-shot wound of the head of the femur and trochanter major. For a few days the man did pretty well, but gangrene of the limb supervened, and he died on the ninth day.

The fourth case was by M. Schmalz, in Saxony, for caries of the head of the bone, which was already detached from the shaft. The boy was cured after a lapse of three years, and a new joint was formed by the trochanter major.

In the fifth case, the operation was performed by Mr Hewson of Dublin for caries. The bone was divided above the trochanter minor, but the patient died three months afterwards from abscess in the pelvis, connected with disease of the cotyloid cavity.

The sixth case given was by Schlichting, in 1829. The patient was a young girl æt. fifteen, and was cured in six weeks, being able to walk easily with a little halt.

The seventh case was by Köhleren Heine of Wurtzburg, and was likewise successful. The eighth case was by Kluge, and likewise for caries, but the patient died on the second day.

The ninth case was by Vogel, in a young girl affected with morbus coxarius, and was successful.

The tenth case was by MM. Jaeger and Textor, in a child of seven and a-half years, with fracture of the neck of the femur and abscess. It was unsuccessful, the patient dying on the twenty-third day.

The eleventh and twelfth cases were both by Textor, for disease of the upper part of the bone, but both were unsuccessful, the first dying the day after the operation, and the second on the fifty-third day.

In the remarks with which M. Bonino follows up the enumeration of these cases, he advocates strongly the propriety of the operation under certain circumstances, contrasting it with amputation of the extremity, the operation hitherto recommended, and giving it a decided preference, as we agree with him it ought to have.

We have here, in the twelve cases, five which succeeded perfectly, a favourable result which the most strenuous advocate for amputation could never look for; and if we were to put out of the question those cases in which the operation ought never to have been performed, and of these there are several, this practice would of course contrast still more favourably with the other. When we consider, in addition, the fact that the limb in all the cases has been left in a state well adapted for all the ordinary purposes of progression, &c., we conceive that the two operations will scarcely bear comparison.

We find that our latest writers on military surgery speak highly in favour of the operation. Mr Guthrie, in his clinical lectures, speaks thus : " I have not done this operation on a living man, but *you must do it*, and I am sure that in the end you will succeed. You ought not to be allowed to take out a limb at the top joint, unless the head and neck of the thigh bone are injured ; and you ought not to take it out if they are, unless the

shaft of the thigh bone is irreparably injured also." Sir G. Ballingall, in his Outlines of Military Surgery, says, " The hazardous character of wounds involving the hip-joint is well known to every experienced surgeon, and the removal of the thigh at the hip-joint, recommended for some of these wounds, is an operation which no one can contemplate with any sanguine hopes of success. The experience of the excision of the head of the femur in cases of caries is not extensive, but it appears to me to be encouraging ; and since I have become familiar with the excision of other joints, I have frequently reflected upon the possibility of substituting the operation of excision for that of amputation at the hip-joint, in some of those cases of gun-shot wounds where the latter has been recommended. And I am now encouraged to speak with more confidence on this point from finding the operation advocated by one of the first authorities in military surgery, Mr Guthrie, in his clinical lectures recently published." M. Bonino does not deny the fact that the operation is a very serious one ; on the contrary, he admits that it is ; but he very justly remarks that this is by no means a sufficient reason for rejecting it altogether. Serious operations are always authorized by the circumstances which demand them—they are only legitimately performed, in fact, in diseases which if left to nature inevitably lead to a fatal result. The severity of the operation is then, if we may so speak, proportioned to the serious nature of the affection which demands it.

In all these cases, then, in which any hope of recovery by surgical interference is offered, the surgeon has only the alternative of choosing between excision of the head of the bone and amputation at the articulation. The question then is not whether excision be a severe operation—this no one doubts—but whether it be less severe than amputation.

M. Bonino then proceeds to draw a comparison in detail between the two operations. We shall not follow him through that part of his paper ; the result of his comparison we have already given.

The cases in which he recommends the section of the head of the bone are the following :

1st, Dislocation, with protrusion of the head of the bone through the soft parts, which it is found impossible to reduce.

2d, In gun-shot wounds involving the upper part of the bone.

3d, In caries of the upper part of the femur, whether primary or secondary.

In regard to the two first, the opinion of the profession appears to be very much at one, but in regard to the last there is still, and very naturally, much difference of opinion.

The great objection to interfering in cases of caries consists in the fact that the cotyloid cavity is very generally involved in the disease, and likewise in the difficulty, we might almost say impossibility, of saying when it is not. Any operation undertaken when this part is affected is worse than useless, as we only remove part of the disease, leaving behind, perhaps, the portion most likely to lead to a fatal result. Such indeed appears to have been the cause of death in some of those operated on.

M. Bonino appears to agree with those authors who believe that the head of the bone is first affected, and the cavity secondarily, and argues that if the affection of this part be not extensive, and being as it were the effect of the caries of the head of the bone, we might hope, having removed the cause, to see the diseased action in this part checked at its commencement. We cannot agree with M. B. in this, and are of opinion that if there be evidence of the cotyloid cavity being affected, that

surgeon will best consult his own reputation and the good of his patient who declines interfering. We cannot conceive that the cautery, as recommended in such cases by Briat, or the gouge and mallet, by Moreau, would be of much avail. We ought in justice, however, to add, that in two of the cases related, the cotyloid cavity was unaffected, and that amongst the five successful cases, three were performed for caries involving the articulation.

Case of Tetanus following the Mechanical Cure of a Fistula Lachrymalis. By M. PETRI.

CASE.—A woman, aged fifty, of a lymphatic temperament, subject for a length of time to a rheumatic affection, wished to get rid of an epiphora which annoyed her. In consequence, a surgeon incised the diseased parts, introduced a seton (mêche), and after a time the nail-headed style of Scarpa. During all the operation, the patient complained of a pain which extended from the artificial canal to the eye, to the cheek, to the forehead, and to the angle of the jaw. Eight days had elapsed, when, after a sleepless night, the patient found that she could no longer open the mouth. In the evening, M. Petri found a contraction of the masseter and temporal muscles, as well as general convulsive movements. He proposed to remove the style from the lachrymal sac ; but the ordinary medical attendant, who did not see in these symptoms any thing but a rheumatic affection, would not consent. The treatment, therefore, was limited to a blood-letting and to twenty leeches applied to the neck. The following day, the rigidity had extended to the muscles of the neck and of the trunk ; those of the arms became affected in their turn ; lastly, the convulsions became general. The style was then withdrawn, and opium was administered ; but, notwithstanding a deceitful remission, the patient sunk at the commencement of the fourth day.—*Sectio.* The lachrymal passages did not present any extraordinary injury. The rest of the body could not be examined.

Dr Betti, to whom M. Petri related this case, told him that formerly he had seen a patient seized with trismus at the moment when Vacca introduced a seton (mêche) into the nasal canal. That celebrated surgeon, suspecting the cause of this accident, immediately removed the foreign body. The trismus subsided in a short time ; and afterwards there was no more thought of curing the patient of the fistula lachrymalis.—From the *Gazzetta Toscana delle Scienze Medico-Fisiche,* in the *Gazette Médicale,* 18 May 1844.

Wound of the Heart apparently Cured. By M. MARINI.

CASE.—The patient, Angela Ceccarelli, aged thirty-two, received, on the 11th July 1843, a blow with a knife in the region of the heart. She fell in a faint, losing a considerable quantity of blood. M. Marini, who was called in immediately, found her fallen into a profound sinking, covered with a cold sweat, with difficult respiration, repeated syncopes, and a fluttering and unsteady pulse. The wound was situated on the inner side of the breast, at two inches and some lines from the sternum. On considering its direction, it was found that it penetrated between the fourth and the fifth rib. Judging from these signs, M. Marini concluded that the patient was in danger of death, it being very probable that there was a wound of the pericardium. She was carried to the hospital, and finding

herself a little better on the following day, she was examined by another medical man, who declared that the wound was a simple penetrating one, and would hardly lead to fatal consequences. The patient not having been confided to the care of the author, he only knew that six or seven blood-lettings and repeated applications of leeches were had recourse to, and that on several occasions she was in imminent danger of death. However, the external wound cicatrized, and the patient was dismissed from the hospital on the 25th August, declared *perfectly cured.* She was seen for some time after going about the streets, presenting the signs and marks of wasting away. At last, on the 15th September, having got up very early to satisfy a call, she fell suddenly, and died in a few minutes.

Sectio.—The external cicatrice was solid and complete. The reuniting tissue which followed it could be easily traced between the fourth and fifth ribs to the interior of the chest. The sternum being elevated, there escaped from the left thoracic cavity half a pound of inodorous lymph of a clear yellow colour. A point of the pericardium presented an abnormal thickening, as well as traces of an inflammation not altogether subsided. There existed numerous and solid adherences of the summit of the left lung. A cyst of a bluish-black colour, filled with coagulated and fluid blood, adhered by a large pedicule to the left side of the pericardium. The pericardium being raised up and opened, it was found filled with clotted and fluid blood, the quantity of which was estimated at about two pounds. The heart was atrophied, thinned, and full of blood. It was penetrated near its point by a round and conical hole, which, like a sphincter, communicated with the left ventricle. This opening, sufficiently large to admit easily an ordinary pair of forceps, presented at its circumference a sort of whitish callosity, soft and smooth, which corresponded exactly to the above-mentioned cicatrice of the pericardiam.—From the *Il Raccoglitore Medico,* and given in the *Gazette Médicale,* 11 Mai 1844.

MATERIA MEDICA AND DIETETICS.

Valerianate of Zinc in Neuralgias and in Chronic Satyriasis.

THE valerianate of zinc was suggested for use as an antispasmodic by Prince Louis Lucien Bonaparte about a year ago, and has since been much commended chiefly in the Italian journals of medicine. In the last number of the "Gazette Médicale de Paris" for June of this year, Dr Francis Devay of the Hôtel Dieu of Lyons has published an interesting memoir on this new medicine. Dr Devay does not find the physiological action of this drug to be greater than that of valerian or of zinc separately, but he regards its medical effects in certain diseases, as in epileptic maladies and nervous affections, as promising to be of the greatest service. He abstains from publishing any account of its good effects in the more serious forms of disease, till a longer time has tested their permanence. But in this memoir he reports four cases of neuralgia and one case of chronic satyriasis, which, after resisting the ordinary treatment, were completely cured by this remedy. The following is his prescription :—

> ℞ Valerian. zinc. . . gr. x. (6 decigr.)
> Gummi tragacanth. . . ℥ss. (2 gram.)
> Ft. pill. xii. Sumat. unam mane et vespere.

As want of room prevents us from giving any further account of this memoir, we probably shall recur to it in a future number.

2 N

PATHOLOGY AND PRACTICE OF MEDICINE.

WE this month lay before our readers an abstract of a paper by Dr Hocken, " On the Comparative Value of the Preparations of Mercury and Iodine in the Treatment of Syphilis," which appears in the April number of the Edinburgh Medical Journal.

Recent changes in our opinions respecting syphilis have tended much to perplex practitioners as to the proper method of treatment ; the opposing parties have probably each been too exclusive ; and we regard the paper of Dr Hocken, though containing nothing original, as valuable from its condensing the opinions of the most trustworthy writers on the disease. We shall take the liberty, however, of still farther compressing it.

On the Treatment of Syphilis by Mercury and Iodine.

1. Syphilis can be cured without mercury.—2. This does not prove that the non-mercurial treatment is the most advantageous.—3. The main points are to know where to employ mercury and iodine, and when to refrain from their employment. This is discussed under three heads.

1st, Is the plan of treatment by mercury and iodine superior to any other ? —The use of mercury was formerly carried to an unwarrantable length. Excessive use of mercury by no means a preventive of secondary symptoms. In Sweden, prior to 1814, mercury largely used in primary syphilis ; average number of secondary affections of bones, 54 per cent. After 1814, use of mercury more limited ; number of diseased bones reduced to $6\frac{1}{2}$ per cent.

Two kinds of chancres, indurated and non-indurated ; former heal much more rapidly with mercury. Sore not cured properly if hardness remain. Many sores which appear to heal rapidly under simple treatment leave behind indurations. Evidence of medical officers during last peninsular war shows, that all sores are curable without mercury ; proportion of secondary symptoms where mercury used, 1 in 75, where none exhibited, 1 in 10 ; that all the secondary forms of syphilis may be cured without mercury ; that secondary symptoms under such circumstances are unusually mild ; that unless when indurated, primary sores healed as rapidly without as with mercury. But all admit that there are some sores which can be healed in a few weeks with mercury, which would require as many months without it.

With regard to iodine, Dr Wallace states, that it is heroic precisely in those forms to which mercury is least suited. Ricord states, that where mercury ceases to be useful, the hydriodate of potass proves the most valuable and efficacious remedy ; but there are mixed cases of secondary and tertiary symptoms where a combination of the two is required.

2d, Comparative value of mercury and iodine in the treatment of the different forms and stages of syphilis.—As a general fact it may be stated, that a modified mercurial treatment is applicable to the primary and secondary forms, while the hydriodate of potass exerts the most undoubted effect in the tertiary.

According to Ricord, the characters which chancres display do not depend on the specific cause which produced them, but on constitutional peculiarities, mode of living, and the local treatment of the sore. In all simple varieties of chancre, as soon as they have assumed a quiet condition under antiphlogistic regimen (if they do not heal quickly without farther assist-

ance), we should have recourse to a mild mercurial course, and to its local application, not so much to promote as to hasten cicatrization, and to protect the constitution.

The danger of secondary symptoms is in direct ratio to the duration of the primary ones, so that that mode of treatment should be adopted by which they are found to be most speedily cured. In the first stage we have to do with a specific sore, both irritable and poisoned, as well as itself poisonous—readily ulcerated by remedies ; while in the second we have a simple ulcer destitute of all these traits. If mercury, short of salivation, fails to produce a cure, it should not be persevered in ; but hyd. of potass with sarsaparilla be given instead, though it seems to exert but little influence over them.

Indurated Chancre.—The advantages of a full mercurial course in this form is clearly proved by the united testimony of all the best modern authorities. It should be continued until the sore is healed, *and all induration of the cicatrice has disappeared.* This does not apply to those cases where the induration has been produced by improper applications (which are to be distinguished by the inflamed as contrasted with the livid or white areola), unless the induration persist after antiphlogistic treatment has been employed, and the inflammation has yielded.

Phagedenic Chancre.—Most authors concur in thinking that as a general rule mercury should not be used in this variety, though occasionally it is a valuable remedy. Dr Wallace, by whom Dr Hocken is chiefly guided, divides these cases into nine varieties—a division which he regards as practical, and on which he founds his rules of treatment.

Without Slough.	With White Slough.	With Black Slough.
1. Simple.	4. Simple.	7. Simple.
2. Inflamed.	5. Inflamed.	8. Inflamed.
3. Irritable.	6. Irritable.	9. Irritable.

In the 1st variety, mercury—unless it has been previously employed—in that case mineral acids with sarsaparilla, and topical mercurial applications with fumigations. In 2d variety mercury should not be given till chancre has put on healing characters. In 3d variety always injurious—hyd. of potass with opium beneficial. In 4th, always beneficial, though sometimes produces febrile mercurial irritation, when it should be given up. In 5th, antiphlogistic treatment and large doses of mercury, which should be discontinued if slough becomes dark. In 6th, if given at all, should be combined with large doses of opium, and an anodyne local treatment. 7th, Not till sore puts on a healing character, when it hastens cicatrization, and then very cautiously, from susceptible state of system. 8th and 9th, Mercury decidedly contra-indicated ; where there is fever and excitement, free bloodletting, &c. ; but where there is constitutional cachexia and debility, hyd. potass. with opium and sarsaparilla internally, with local antiphlogistics.

Warts and Fungi.—If irritable, must be quieted before having recourse to stimulant applications. When indolent, wash with dilute liq. chlorid. sodæ, then dust with calomel. In a variety which is flat or rounded and comparatively even, mercury of striking utility ; Dr Wallace has never seen it resist mercurial treatment.

Bubo.—Hunter was of opinion that their resolution depended upon the quantity of mercury that could be made to pass through them. Dr Wallace held similar views. Primary syphilitic bubo may be resolved in 99 cases out of 100, if mercury be properly employed, and its operation assisted by rest, abstinence, laxatives, and cooling lotions. Dr Hocken coincides in

this, but thinks it should not be employed where acute inflammation exists, or where patient is plethoric, until this has been reduced by rest and blood-letting. Locally, on Malapert's plan, of great use both in first stage and after suppuration. Remove epidermis, and apply for two hours with a bandage a piece of lint soaked in a lotion of hydrarg. bichlor. ℈j., aquæ distill. ℥j. An eschar follows, which must be treated on common surgical principles. In chronic bubo, friction with ioduret of mercury ointment (hyd. proto-iod. ℈j., adip. ℥j.) or compresses soaked in tr. iodinii ℥j., aquæ ℥ii. Open or ulcerating buboes to be treated on the same principles as primary chancres.

Constitutional Syphilis.—Dr Hocken adopts the division into secondary (attacking skin, mucous membranes, eyes, testicles) and tertiary (tubercles of skin and cellular tissue, affections of the bones, periosteum and fibrous tissue, &c. &c.) ; in both of these mercury and iodine are requisite. As a general rule, Dr H. regards the mercurial treatment as best adapted for the secondary ; the treatment by hyd. of potass for the tertiary group.

All the diseases of the skin require antiphlogistic treatment in the early stages, and then yield in general either to a mercurial treatment or that by hyd. of potass.

Skin diseases we shall class in two groups, according as they are most benefited by mercury or by hyd. of potass, remarking that in none is mercury to be used during the acute stage.

Mercury.	Hyd. of Potass.
Papulæ. (Also weak lotions of corrosive sublimate locally.)	Vesiculæ. ⎱ Nutritious Diet and
Squamæ. (Locally—ung. hyd. nit.-ox. or sol. bichlor. hydrarg.)	Bullæ. ⎰ Opium.
Exanthemata.	Pustulæ. When severe, as above.

Fissures.—Mercury. [In these we have found great benefit from arsenic, where both mercury and iodine had failed.]

Condylomata.—Wash with dilut. solut. of chlor. of soda, and dust with calomel ; mercury internally.

Affections of Mouth, Throat, and Nostrils.—All the simple sores, when brought into a healthy condition, are beneficially influenced by mercury. Sloughing sore throats should be treated antiphlogistically, when the patient can bear it ; when occurring in broken-down constitutions, with iodide of potass, sarsaparilla, and opium. When the ulcer has taken on a healing action, cicatrization is promoted by mercury.

Tertiary Symptoms.—Mercury inefficacious. Hyd. of potass beneficial, especially in diseases of the bones, fibrous tissue, and joints ; also in early stage of disease of bones of nose, palate, or face. The ung. hydrarg. nit.-oxid. may be used locally.

Syphilitic Tubercles.—In indolent syphilitic tubercles, a combination of iodine and mercury may be employed. (Ricord's formula was one of the following pills daily, on the fifth day two pills are given ; the mercury is soon dropped, and the treatment concluded by hydriodate of potass : Hyd. proto-iod. gr. j. ; ext. conii gr. v. ; pulv. opii gr. ss.)

The next part of Dr Hocken's paper is devoted to the method of employment of mercury and iodine, and is so meagre, that we shall substitute for it an abridgment of the views of Desruelles, Cullerier, Ricord, Biett, and the other authorities in this disease, with a selection of the formulæ employed by them. *Calomel* is chiefly employed when a speedy and powerful effect is required.

Bichloride of Mercury is strongly recommended by Dzondi and Dupuytren, chiefly for the treatment of constitutional symptoms. The former began by giving one-fifth of a grain, and increased it so that in thirty days the patient took a grain and a half. Dupuytren was of opinion that small doses were more efficacious than larger ones ; he rarely exceeded the sixth of a grain for a dose, usually giving one of the following pills three times a-day. ℞. hydrarg. bichlorid. gr. ii. ; pulv. opii gr. viii. ; gum. guaiaci ℥ss. M. ft. pill. xvi.*

Pill. Hydrarg.—The action of these is well known, and they are perhaps as good a remedy as we can employ ; pills made of mercurial ointment as recommended by Sedillot are milder, and sometimes agree better with the stomach.

℞. Ung. hydrarg. fort. ℥i. ; sapon. Hisp. Ӡii. ; pulv. altheæ et mucilag. q. suff. ft. pill. xxxvi. gr. iv. in singulis ; ii.-iii. quotidie pro dose.

Proto-Ioduret.—It is especially useful in secondary syphilis, tubercles, and exostoses. The following is the formula of Cullerier. ℞. hydrarg. proto-iodureti gr. xii. ; pulv. opii gr. vi. ; gum. guaiac. ℥j. M. ft. pill. xxiv.

Iodine.—Dr Wallace found the hyd. of potass to agree better than pure iodine. Ricord begins with ten grains daily, and in divided doses, and gradually increases it.

Dr Hocken concludes with a review of the comparative merits of the remedies, and his conclusions are as follows :—

1. That mercury and iodine are the two main remedies for the treatment of syphilis.

2. That neither is a specific, and neither can be used empirically.

3. That mercury is adapted to nearly all the forms of primary syphilis, especially to the indurated.

4. That in constitutional syphilis, it is applicable to a great majority of the secondary, but either hurtful or useless in the tertiary.

5. That iodine is inert in almost all the varieties of primary syphilis, with the exception of some forms of phagedæna ; that it is less valuable than mercury in the secondary class, except in cases of a hectic and debilitated constitution ; that in tertiary symptoms it is more valuable than mercury.

6. That mercury and iodine are advantageously combined in cases presenting a combination of secondary and tertiary diseases.

7. That when mercury is employed, the mildest constitutional effect capable of overcoming the disease should be preferred.

8. That the only form of iodine applicable is the hyd. of potass, which should be given in moderate doses.

9. That, however valuable hyd. of potass may be in certain forms, it never can be substituted for mercury in the treatment of syphilis.

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

Risk attending on Injections into the Uterine Cavity.

In a case of fluor albus, Hourmann observed that immediately on injecting a decoction of walnut leaves into the uterus the patient complained of

---

* The cyanuret is frequently substituted for the bichloride of mercury, being more soluble, and not so easily decomposed, acting more quickly, and without producing pains of the stomach. ℞. Hydrarg. cyanureti gr. xxiv. ; ammon. muriat. ℥iii. ; guaiaci gum. ℥iii. ; ext. aconiti ℥iii. ; ol. anisi g^tt. xxiv. M. mucilag. q. s. ut ft. pill. cccc. One or two twice or three times a-day, gradually increasing the dose.

violent pain in the abdomen, and an attack of metroperitonitis ensued which required energetic treatment for its removal. Examples of the same result of injection occurred twice to Bretonneau, who presumed that the disease arose from the injected fluid passing through the Fallopian tubes into the peritoneal sac. He found that on injecting copiously and forcibly into the uterus of the dead subject, in two experiments the fluid passed through the Fallopian tubes ; in one the injection returned through the uterine vessels (?), and in six it repassed between the syringe and the cervix uteri. —*Schmidt's Jahrb. B.* 30, *S.* 41.

Use of the Tampon for the Cure of Utero-Vaginal Blennorrhœa.

HOURMANN affirms that the irritation excited by the secreted matters often keeps up the flow ; he therefore considers it advantageous to separate the sound from the diseased parts in order to keep off the morbid secretions, and for this purpose he has found plugging the chief, and in some instances the only, means of cure. The author recommends the tampon to be made of charpie, if it is to be placed high in the vagina, but as soon as the parts can be kept dry, this material is to be changed for prepared wool, which can be introduced by means of a "*porte-mêche*," in larger or smaller dossils, so easily as to be done by the patient herself. Thirty-eight cases of blennorrhœa of different kinds have been treated in this manner with the most complete success. The tampon has been resorted to in females of all ages, and even in those in whom the parts were in a high state of inflammation. In these latter cases, and where the person was very young, the plug was slightly smeared with oil. If the flow was very copious, the cotton was changed twice a-day. No injections were required, the most essential point being to keep the parts as dry as possible. The same treatment was adopted and proved successful in blennorrhœa of the rectum.—*Schmidt's Jahrb. B.* 31, *S.* 334. .

Trismus Neonatorum treated with Musk.

AN epidemic, *trismus neonatorum*, has been recently observed by Cderschjöld in the lying-in hospital at Stockholm, and Levy in the Freidrich's hospital at Copenhagen. Of 22 cases in the practice of the latter, 20 died ; in 15 a *post-mortem* examination was made, and in 14 inflammation of the umbilical arteries was observed. In general both arteries were affected, especially in that part of their course which runs along the sides of the bladder ; the peritoneum in their neighbourhood was strongly injected. The canals of the vessels were dilated, and filled with a dark purulent fetid matter ; their parietes were frequently adherent to the omentum or intestines, and appeared somewhat thicker and darker than usual. In several cases perforation of the vessels with effusion of pus into the pelvic portion of the peritoneal sac was found. Thorston states that he has found the internal administration of musk and the external application of the unguent. cinereum highly useful.—*Fricke und Oppenheim's Zeitschrift, Hft.* 9.

Kermes Mineral in Pleuro-Pneumonia in Children.

GUERSANT has found that in this disease the frequency of the pulse and inspiration, and the severity of the local symptoms, are gradually diminished by the use of the kermes mineral, given in doses of from two to three grains,

three or four times in twenty-four hours, for children five or six years old. —*Journal für Kinderkrank, B. i. Hft. 2.*

<hr/>

On Testing the Qualities of a Nurse's Milk.

DEVERGIE, inspector of the institution for nurses in Paris, has given his conclusions as to the quality of the milk in reference to its microscopic characters. The milk of the human female contains corpuscles of three different sizes. That which contains the largest globules is the most nutritive, but milk containing those of a moderate size is the most frequently met with. The milk with large globules is found chiefly, though not without exception, in women of the sanguineo-lymphatic temperament. There is sometimes a remarkable difference between the milk of the two breasts, which it appears often depends on the child being permitted to suck the one breast in preference to the other. When the milk of one nurse is found not to agree with a child, the microscope may be of use in determining whether or no the milk of a second is not apparently of exactly similar quality; but there are many changes which it undergoes that the microscope cannot show.—*Gazette Médicale, Fevrier* 1844.

<hr/>

FORENSIC MEDICINE AND MEDICAL POLICE.

Means of Correcting the Changes which take place in Rain-Water kept in Cisterns newly constructed with Lime. By M. D'ARCET.

A PROPRIETOR in the country, who had no other water but that obtained from a bad draw-well, determined to erect a cistern which should receive all the rain-water that dropped from the roofs of his houses. The cistern was accordingly built of stone, and lined with tiles united by mortar. In process of time the cistern was filled, but the water which was taken from it had a greenish tint, and was so charged with lime, that animals refused to drink it, and it could not even be used for watering flowers or shrubs, as it left them covered with a white coating. M. d'Arcet was requested to give his advice, as to how these changes in the water could be prevented. He recommended the cistern to be emptied and sponged, to render it as dry as possible, with the view of saturating the lime with the lees of oil, hot linseed oil, or some other fatty composition, according to the method which we are told by Vitruvius and Pliny was pursued by the Greek and Roman architects. M. d'Arcet, however, found on descending into the cistern, that the lime was so saturated with water, which continued to distil from it drop by drop, that it was in fact impossible to dry it sufficiently for the purpose; he therefore relinquished this attempt, and resolved to endeavour to convert the lime into a carbonate, and thus render it unassailable by water. A small brick furnace was erected in the cistern, in which a hectolitre of charcoal (6105 cub. in.) was burned every day for a week, the cistern being kept nearly closed during the day, but freely exposed to the air at night. A few grains of the lime were scraped off daily, for the purpose of examining what change had taken place in it; in less than eight days, it was found that the water with which it was mingled no longer presented the characters of lime-water, nor decomposed the muriate of ammonia; for further security, however, the charcoal was burned in the cistern for a week longer; at the end of that time it was thoroughly cleaned out, and when filled with rain-water, the fluid was found sufficiently pure to serve for experiment at the laboratory of the Royal Mint instead of distilled water. An instance exactly similar to the

preceding is mentioned by the same author, where, for the purpose of correcting the water, twelve kilogrammes (about 28 pounds) of animal charcoal were thrown into the cistern ; this had the desired effect, and four years thereafter, without the charcoal being renewed, the cistern still furnished water sufficiently good for all domestic purposes.—*Annales d'Hygiène*, Avril 1844.

PART IV.—MEDICAL MEMORANDA.

On the Time required for the Transit of Coins and the like through the Intestines, when swallowed accidentally.

As parents, and even the junior members of the profession, are apt to be alarmed by children accidentally swallowing objects which are given to amuse them, such as pebbles, leaden bullets, coins, &c., should you consider the following communication to deserve a place among your memoranda, it may perhaps be the means of quieting the apprehensions of those who may be called, and have not previously been concerned, in such cases.

On the 2d of June of the present year, I was hurriedly sent for by Mr M., who became much alarmed in consequence of one of his children, a boy three years old, having swallowed a farthing. As I was informed that after the coin had disappeared the child had no cough nor difficulty in swallowing, I was satisfied that the foreign body had passed into the stomach, and that it would in due time be evacuated from the bowels without any detriment to the little patient. Of this, however, the parents were not a little sceptical, and became anxious lest the detention of copper in the body might prove deleterious. To allay their apprehensions, therefore, some infusion of senna was administered to the child every third morning to accelerate the expulsion of the coin, which happened on the seventeenth day of the same month. When swallowed it was quite bright, but after its expulsion it was of a dark colour. It is unnecessary to state that there was no uneasiness complained of during its detention. Pending the transit of the farthing in the present case, two other instances were related in which each of the children swallowed a similar coin ; but, unlike what had occurred in the first child, in each of the latter the farthing was evacuated on the third day. Some time previously each of two other children, about the same age, swallowed a half-sovereign, which in both instances was retained for three months. Dr A. T. Thomson relates two cases in which large coins had been swallowed ; one of these was that of a boy, who swallowed a penny piece, which did not make its appearance for six months thereafter ; the second was a younger boy, who also swallowed a similar coin, but, unlike what happened in the first instance, it escaped after two months' detention. In both instances the coins were much eroded, but they exerted no injurious effect on the health of the children. Dr Paris mentions a case in which, with a suicidal intent, six penny pieces were swallowed, and they remained six years in the intestines ; and Dr Baillie records a case in which, on dissection, he found embedded in a pouch in the stomach a coin which had been swallowed some considerable time previously.   WM. CAMPBELL, M. D.,
Lecturer on Midwifery, &c.

12th July 1844.

PART I.—ORIGINAL ARTICLES.

Case of suspected Poisoning by an Over-dose of Tartar Emetic, sent out by a Non-professional Dispenser. By EBENEZER SKAE, M.D., of Leven, Fifeshire.

THE following outline of a case, in which death was suspected to have been occasioned by an over-dose of tartar emetic, besides presenting some features of interest in a toxicological point of view, appears to furnish a very striking example of the disastrous consequences which are calculated to result to the community, from the dangerous but too prevalent practice pursued in this country, by individuals undertaking the retail and dispensing of drugs possessing the most energetic and potent qualities, without their having received any competent instruction on the nature and properties of therapeutic agents, and who are consequently in a state of comparative ignorance, both as to their uses, and the doses in which they can be safely administered. To what extent an enlightened and a professedly philanthropic legislature is responsible for the continuance of a practice fraught with such serious contingencies, it is not my present object to inquire.

On the morning of Friday the 21st of January 1842, about three o'clock A. M., I received a hurried request to visit J. J., who resided within a short distance of me, and who, I was informed, was to all appearance expiring. On my arrival at his dwelling, a few minutes afterwards, I found that he was dead. He was a man of short stature, of robust habit of body, and about forty-five years of age. The external aspect of the body presented nothing remarkable, with the exception of a tumefied and congested appearance of the integuments of the face and neck, and considerable distention of the abdomen. On making some inquiry regarding the nature of the symptoms which had preceded death, the statements I received from the family were far from being intelligible and satisfactory as accounting for the

cause of death. My judgment of the case, indeed, rested on a knowledge of the following facts, some of which had been a matter of personal observation to me in the course of my former professional attendance on the deceased, and the rest were communicated to me by his family.

For several years, at a previous period of his life, he had been much addicted to the intemperate use of alcoholic stimuli, during which time he was repeatedly under my care, in consequence of his having been affected with attacks of *delirium tremens;* but four years previous to his death he had joined the Total Abstinence Society, and I had reason to know that, up to the last week of his life, he maintained habits of the strictest sobriety. On " Old Hansel Monday," which is invariably observed throughout Fife as a holiday, especially among the working-classes, and which occurred that year on the 17th of January, being the Monday of the same week in which he died, he unfortunately broke through his good resolutions, and foolishly indulged in the use of liquor till he became intoxicated; on Tuesday and Wednesday he continued his debauch; on Thursday morning at ten o'clock, feeling himself suffering greatly from the usual effects of intemperance, he sent for an emetic and took it, as had been his former practice under similar circumstances, when he had always experienced considerable relief by its employment. The action of the vomit commenced eight or ten minutes after its exhibition, and was stated to have been powerful, which was followed about two or three hours afterwards by profuse diarrhœa, and this latter symptom continued with little intermission up to the moment of dissolution, which took place sixteen hours after the emetic had been administered. During the latter part of the day, he had complained very much of pain in his throat and in the region of the stomach, and he appeared to labour under great general uneasiness and restlessness, with occasional sweatings and great prostration of strength. He had been very fretful under his sufferings, and had incessantly importuned his wife and family to send for my assistance, which they had as steadily refused or evaded, from a belief that his complaints were of the same nature as he had formerly endured from similar causes, and that they would gradually abate, as they had frequently done on previous occasions. At length his impatience to see me had become so strong, that he declared he " would go to the doctor himself;" and by an unexpected exertion of his own strength, he contrived to slip out of bed, when he almost instantly fell prostrate on the floor in a state of insensibility. On this his wife and family immediately alarmed the neighbours and sent off for me. On replacing him in bed, life appeared to be extinct; a fact but too evident to myself on my arrival a few minutes afterwards.

On carefully considering these circumstances, I experienced

great difficulty in forming a satisfactory conclusion as to the character of the symptoms which had resulted fatally in this case. From all that I could learn, I had no reason to believe that the characteristic phenomena of *delirium tremens* had been present during life. That any serious lesion of an apoplectic nature had taken place within the cranium, appeared at least as improbable, from the leading features of such a seizure having been absent in the case. There had also been an entire absence of any indications that could lead me to suspect the existence of any thoracic disease of a rapidly fatal nature. The train of symptoms appeared to imply a strong probability that the seat of the disorder was in the abdominal viscera, and moreover that the disease might have been *enteritis;* at the same time, I could not divest my mind of a suspicion that the effects of the emetic had some connexion with the morbid phenomena, which had been developed subsequently to its administration ;—a suspicion, indeed, which was in the first instance suggested to me by the language of the widow of the deceased, who, in reply to my question as to how the vomit had acted, stated that it had done so very powerfully, and that " he," to use her own words, " appeared never to have got above it." Under the influence of this impression, I was naturally led to make some inquiry regarding the appearance of the emetic which had been given, and also where it had been purchased ; when I was informed that it had been obtained from a grocer's shop where drugs of different kinds were sold, and that it consisted of a *white powder, of a similar bulk to that of the brown vomits* they had formerly been accustomed to get from the same shop. This information led me at the moment to infer, either that the vomit in question had consisted of sulphate of zinc in powder, or that possibly, from some mistake, an overdose of tartar emetic had been sold by the grocer's shopkeeper who had supplied it. As the family, and especially the widow, appeared to attach considerable suspicion to the violent action of the emetic, inquiry was made the following day at the shop where it had been purchased, when the shopman at once admitted, in terms exhibiting no small degree of confidence in his own knowledge of such matters, that he had supplied them with *two drops or about fifty-five grains of tartar emetic as a safe and proper vomit.*

On the 28th of the same month, in consequence of a warrant from the sheriff, the body was disinterred for the purpose of examination, which Dr Grace of Cupar and myself were requested to make, and thereon report. As I find I have mislaid my copy of the report which we drew out and submitted on the case, I shall content myself with giving here a statement of the leading facts embodied in it, as I have them recorded in my note-book.

The integuments of the face and neck were of a dark purple colour, those of the body generally exhibiting indications of in-

cipient decomposition. There was an oozing of sero-sanguineous fluid from the nostrils which discoloured the cloths. On exposing the contents of the cranium, the vessels of the investing membranes presented a congested appearance, and in the ventricles and sinuosities of the brain there was some serosity. The substance of the brain itself appeared healthy.

On laying open the pharynx and œsophagus, the mucous membrane of the former and the superior portion of the latter strikingly indicated the existence of inflammatory action during life, from its dark, discoloured, and injected appearance. There was no effusion of serum within the thorax; the lungs were somewhat congested, free of adhesions to the walls of the chest, and otherwise healthy. The heart was full-sized, but not hypertrophied, and perfectly normal in all its valvular apparatus, its right cavities containing dark semifluid venous blood.

On opening the cavity of the abdomen, there was found serous effusion to the extent of from two to three ounces. The lining and investing membrane presented nothing unusual in its appearance. After laying open the stomach, we found that its mucous membrane was softened, and loosely adherent to the submucous tissue, being easily scraped off with the point of the finger. While no circumscribed discoloured patches were observable, still the viscus presented a highly vascular appearance, especially in its greater curvature, and continued along a considerable portion of the duodenum. The rest of the alimentary canal appeared comparatively healthy. A considerable quantity of a light brown, thick, and homogeneous fluid was contained in the stomach, and was found more or less in quantity throughout the whole length of the intestines; which, it may be here remarked, corresponded in character with that of the dejections before death. The contents of the stomach were collected and set aside for analysis, and the stomach itself was removed and preserved in spirits. The liver presented some marks of disease of long standing, evidently the result of the former intemperate habits of the deceased. The spleen, kidneys, &c., were not particularly examined.

After filtering the fluid which had been contained in the stomach, it was tested by means of lime-water, tincture of galls, and sulphuric acid. The two former, when added to the fluid, produced in a faint degree their characteristic precipitates; that, however, produced by the addition of sulphuric acid was very satisfactory, and was taken up again when the reagent was added in considerable excess.

From the character of the symptoms which had been exhibited before death, as far as our information enabled us to judge,—from the suddenness of their fatal termination,—from the appearance presented by the pharynx, gullet, stomach, and duodenum;—from the evidence of the presence of tartar emetic in the contents of

the stomach, indicated by the reagents employed, and especially by the sulphuric acid, taken in connexion with the fact admitted by parties, that fifty-five grains of tartar emetic had been administered to the deceased previous to the accession of the urgent symptoms which resulted fatally in sixteen or seventeen hours after its exhibition,—we felt convinced, without any additional proof derived from a more elaborate chemical analysis, that death had been occasioned by a poisonous dose of tartar emetic, and accordingly gave this as our opinion of the case.

The stomach having been removed and preserved in spirits, as already stated, I subsequently deemed it desirable, both for my own satisfaction and for legal proof, if necessary, to institute a more extended analysis of the menstruum in which this viscus had been contained. The stomach was removed after being well bruised in the fluid, a small quantity of which was then tested by means of sulphuric acid, which produced and took up, when added in excess, the characteristic precipitate. The remaining portion of the fluid was then acidulated with muriatic and tartaric acids, and, according to Dr Turner's process, was submitted to the action of a stream of sulphureted hydrogen, when the peculiar orange-red sulphuret of antimony was precipitated. This was next carefully collected on a filter, dried, and placed in a tube through which was transmitted a stream of hydrogen, while the flame of a spirit-lamp was made to play around that portion of the tube containing the sulphuret. On breaking the tube, it was found internally to be coated with a metallic-looking crust, from which I inferred that the hydrogen had been transmitted with too great rapidity. To procure the metal, if possible, in a more satisfactory form, the fragments of tube were submitted to the action of nitric acid, and the sulphuret was again precipitated, collected, dried, and subjected as before to the action of hydrogen, which was this time slowly and cautiously transmitted. On afterwards breaking the tube, metallic antimony in minute shining particles was found within it.

The grocer and his shopman having been indicted for culpable homicide, the case was brought forward at the spring circuit court of that year at Perth; but, in consequence of objections to the relevancy of the indictment having been entered by the counsel for the panels, the consideration of these was adjourned to the High Court of Justiciary in Edinburgh, where they were subsequently considered, and unanimously repelled; in consequence of which the parties were again indicted to stand their trial at the autumn Perth circuit. When the case was called, however, the public prosecutor stated that, for various reasons, he did not intend to bring them to trial. Their excellent character, their deep regret for the unfortunate mistake, the entire absence of criminal intention, the probability of death having been accelerated by other causes than the tartar emetic, and the salutary effects of giving the case sufficient publicity being already

gained, were stated as the principal grounds on which he dropped the prosecution. The accused were then dismissed after a forcible admonition from the bench, when such dangerous practices were censured in the strongest terms.

In shortly adverting to the leading features of the preceding case, with the view of comparing these with what has been already ascertained as characterizing the action of antimony in poisonous doses, and the morbid appearances presented after death, an important consideration must not be overlooked as a necessary element in forming a just solution of the question, and that is, the very scanty materials which we already possess as data to enable us to arrive at a satisfactory conclusion on the subject. The number of parallel cases on record, as far as I am aware, is but small, and even these few do not altogether correspond in their details. The phenomena attending the action of the drug, however, when administered as a therapeutic agent, are sufficiently well known, and these would naturally lead us to expect that urgent sickness and vomiting, followed by troublesome diarrhœa, would be most constantly and prominently exhibited among the effects produced by it when taken in a poisonous dose, and retained sufficiently long to admit of its absorption and constitutional action ; nor are we deceived in such an expectation, for in almost every such case on record it will be found that these symptoms have been uniformly present to a greater or less extent. Professor Christison, in his invaluable work on poisons, quotes, among other cases which illustrate the constancy of these symptoms, one which exhibited a very striking resemblance to cholera, which, besides being characterized by pain in the stomach, vomiting, colic pains, diarrhœa, small contracted pulse, and great prostration of strength, was attended with distressing cramps in the legs.* In other cases we find that, in addition to the vomiting and diarrhœa, a cold clammy state of the skin, swelling of the abdomen, hiccup, tremors, convulsions, and delirium, have been the attendant symptoms.

About nine years ago I had an opportunity of observing the symptoms produced by a poisonous dose of tartar emetic, in the case of a child from eighteen months to two years of age. I had occasion to employ it as an external counter-irritant in the form of ointment on another member of the family. The mother had imprudently laid aside the box containing it, in a situation within reach of the child. On being sent for, I found the mother in a state of the greatest alarm about her boy, who certainly appeared to be in a very dangerous condition. His features had that pinched collapsed appearance so characteristic of cholera, the eyelids were half unclosed and the pupils turned upwards, the extremities were cold, and the cutaneous surface was bedewed with a clammy moisture ; the pulse was small and

---

* Christison on Poisons, p. 448.

thready and increased in frequency; there was incessant diarrhœa, with occasional distressing attacks of sickness and vomiting, the ejected matter being of a very bilious character. The box containing the ointment was put into my hands, and the mother stated that she had taken it from the child while he was in the act of licking his fingers, the marks of which were imprinted on the ointment contained in it; soon after which he became affected with the symptoms under which he was then suffering. Decoction of cinchona was immediately prepared and exhibited in small and frequently repeated doses, and within a few hours I had the satisfaction of finding an amelioration of all the symptoms, which was eventually followed by complete recovery.

In addition to the symptoms above alluded to, Magendie was led to conclude, from experiments on animals, that the poisonous action of tartar emetic was uniformly characterized by inflammation of the pulmonary organs; but as Professor Christison has justly observed, the circumstance of such symptoms having been absent in all the cases on record, implies the probability of some fallacy in these experiments. It is important to remark, however, that the inference drawn by Magendie from his investigations, viz., that death is produced in poisoning with tartar emetic by its absorption exciting a general inflammatory state of the whole system, derives considerable confirmation from the fact of its harmonizing with the result of similar investigations conducted by other individuals. If this view of the subject be well founded, which is not improbable, it may be assumed that the uniform and prominent indications of gastro-intestinal irritation are essentially characteristic of the poisonous action of the drug, while the other accompanying symptoms may be regarded as additional features of its general irritant effects, more or less modified by contingent or constitutional causes.

From the circumstance of J. J., the subject of the case under consideration, not having been seen during life, it is evident that the statement of his symptoms contained in the preceding outline must in several respects be regarded as imperfect; these, however, as far as they were ascertained, do not appear to have exhibited any material difference from those of other cases on record. As in them, so in his case, there were present the leading characteristic irritant effects of the poison, indicated by pain in the throat and epigastric region, and by vomiting and diarrhœa. Cramp in the legs was not stated to me as having been complained of; but as this symptom is probably in such cases as much symptomatic of irritation in the stomach and bowels as it is in similar states of derangement produced by other causes, its invariable presence does not seem to be a necessary accompaniment of the poisonous action of tartar emetic. Hiccup, convulsions, and delirium were not specified as having been among the features exhibited in the case; but these, it may be observed, do not appear to have been uniformly

present in the other cases on record ; such symptoms conse-
quently, more especially the two last, may be fairly considered
as indicating the narcotico-acrid action of the drug on the brain
and nervous system, which may be of variable intensity in
different cases, and whose indications may be more or less modi-
fied by constitutional and other causes. In the absence of these
symptoms, however, there were others exhibited of a character
which denoted not merely great prostration of the general
strength (a feature strikingly marked in the case quoted by
Dr Christison and formerly alluded to), but also excitement and
exalted irritability of the brain and nervous system, indicated
by the general uneasiness and intolerable restlessness of the
sufferer, and expressively manifested by his peevishness and the
irritable state of his temper.

In reference to the *post mortem* appearances exhibited by the
case under consideration, I shall merely remark, that they
correspond very nearly with those stated to have been observed
in the case of M. Récamier, which is quoted by Dr Christison,
and which, as far as I know, is the only authentic instance on
record of the necroscopic appearances produced exclusively by
the poisonous action of tartar emetic.

In concluding these brief observations, I must advert to a
circumstance of no small importance, which ought to be taken
into account in forming an estimate of the poisonous qualities of
tartar emetic, and that is, the fact of its activity being greatly
modified by the state of the body at the time it is administered.
The extent, indeed, to which it has been given as a medicinal
remedy, especially in the treatment of pneumonia, would lead us
to entertain considerable · doubt regarding its activity as an
irritant poison. But while this consideration should not be
overlooked as an important element in the question, it must also
be kept in mind, that the action of other therapeutic agents is
influenced by laws of an analogous nature. It is well known,
for example, that in some diseases, opium may be safely admin-
istered to an extent that would prove poisonous in the absence
of those symptoms for which it is exhibited. Such a peculiarity,
however, in the action of tartar emetic, does not appear to me
to weaken the evidence of poisoning in the case of J. J. That
condition of the system which usually forms the sequel of a
debauch is unquestionably characterized by weakness and de-
pression of the powers of life, accompanied with much general
irritability, especially of the brain and nervous system ; and
these indications bear no remote resemblance to the symptoms
attending the constitutional action of the drug in a poisonous
dose. Hence, so far from such a state of things tending to fortify
the body against its baneful influence, there seems every reason
to conclude that the circumstance in question would materially
facilitate its destructive effects.

Leven, Fife, *July* 27, 1844.

Trial of Samuel Clark on a Charge of Murder by Stabbing in the Vulva; with Remarks By WILLIAM TAIT, M. D., Surgeon to the Edinburgh Police.

SAMUEL CLARK, weaver, was tried before the High Court of Justiciary at Edinburgh, on Thursday the 27th July 1843, for murder; "in so far as, on the 9th day of June last, within the house in the West Port of Edinburgh occupied by Alexander Gibb, lodging-house keeper, he did wickedly, maliciously, and feloniously attack and assault Mary Peters or Clark his wife, and with a knife or some other sharp instrument, or by repeated blows or kicks, had inflicted a severe and mortal wound on her person, in consequence of which, or of the loss of blood, or hemorrhage proceeding therefrom, the said Mary Peters or Clark died that night, or early next morning, and was therefore murdered by the said Samuel Clark."

The evidence against the accused was chiefly that of his fellow-lodgers, his daughter, a girl too young to be put upon oath, the lodging-house keeper and his wife. From this it appeared that he and the deceased had been out begging during the day, and had returned to their lodgings about eight o'clock in the evening, both much intoxicated. A quarrel ensued, and blows were exchanged between them, but apparently of a trifling nature. She was represented by one witness to have been kicked, and this statement was corroborated by the declaration of the deceased herself in the presence of the police-officers and several of the inmates of the house. This was said to have occurred a little after nine o'clock; and before this, the panel and his wife were observed, by a person in bed in the same apartment, to be sitting opposite to each other at the foot of their bed, apparently in friendly conversation. It was at this time too dark to observe distinctly what was going on, but the witness was certain that they were sitting face to face. The foot of the one bed was only about eighteen inches from that of the other, their heads being in the opposite direction. Having fallen into a slumber, he did not know how long they sat in that position, but was afterwards awakened by Mrs Clark calling for assistance. On inquiry she stated that Clark "had kicked her in the lower part of the belly, and that she could not live." She immediately left the room and went to the kitchen to seek some of the females who were in the house. A light having been procured, a stream of blood was observed along the passage from the kitchen-door to the bed-room, and a considerable quantity on the floor of the room near to the bed. The females, after examining her condition, were of opinion that it was a case of flooding, and sent the landlord and a lodger for medical aid. Clark himself having, during the

2 P

bustle, gone out of the house, did not return for some time. Three medical gentlemen were called upon, but none would attend. They returned home, and all in the house went to bed. No more was heard of the case till four o'clock next morning, when the watchman on the station was informed that Mrs Clark was dead. Being called upon officially, I immediately visited the house, and found the body stretched upon the bed, remarkably pale, and apparently without external injury. There were clots of blood about the external organs of generation, but no bruise or other injury to confirm her statement that she had been kicked. The bedclothes were literally saturated with blood, and traces of it were still observable upon the floor, although the keeper of the house had attempted to wash it out. The uterus was much enlarged, and the outlines of a fœtus could be distinctly traced through the parietes of the abdomen. The impression produced upon my mind was, that the woman had died from uterine hemorrhage, although I did not in the presence of so many persons attempt to confirm this opinion by an examination per vaginam.

In his declaration, Clark stated that his wife had not menstruated for six months, and that she had informed him that she had become unwell that forenoon. He denied all knowledge of her being with child. If she had died from injury, it was unknown to him, for he had neither kicked nor injured her in any way.

The body having been removed to the police-office, Professor Simpson, Dr Graham Weir, and myself, made a *post mortem* examination on the forenoon of the 11th curt., and prepared a report, the substance of which was,—That there was no external injury, with the exception of a spot of ecchymosis on the external aspect of the left thigh. The brain and membranes were healthy, but the blood-vessels and sinuses empty. The viscera of the chest and abdomen were all healthy, although more blanched than usual, and only about three ounces of blood escaped on dividing the large veins and removing the heart. The uterus contained a fœtus apparently about the sixth month, and the os uteri was impervious. " In the superior part of the vulva there was an incised wound an inch and a quarter in length, and at its inferior extremity a quarter of an inch in depth. It commenced a quarter of an inch above, and passed obliquely downwards and inwards about two lines to the left of the orifice of the urethra, and terminated within the vagina under the arch of the pubis. On the surface of the wound there were numerous orifices of blood-vessels of different sizes." From the facts embodied in the report it was inferred,—

1*st*, That this woman was not affected with any natural disease which would account for her death.

2*d*, That the almost total absence of blood in the body warranted the opinion that she died from hemorrhage.

3d, That she did not die from uterine hemorrhage, a possible occurrence in her impregnated condition.

4th, That there was no wound in any part of the body from which blood could have flowed but that in the vulva.

5th, That this wound must have been the result of violence inflicted with an edged instrument.

After reading the report as part of the medical evidence, I underwent a very lengthened examination on the nature of the wound, and probable mode in which it had been inflicted, and particularly in reference to the possibility of its being suicidal. On this latter question there was a slight difference of opinion between Professor Simpson and myself; he having stated "*that it was very improbable,*" and I "*that it was so difficult as almost to amount to an impossibility.*" My reasons for this opinion will be stated in the remarks on the trial. On the other topics embraced in the examination it is unnecessary to make any observation.

Drs Allan Thomson and Douglas M'Lagan read each a report; that of the former having reference to a *microscopical*, and that of the latter to a *chemical* examination of matter found upon the blade of a knife produced in evidence, and found in the prisoner's possession the morning on which he was apprehended, by which it appeared that nothing was discovered but a little *rust* and *fatty* matter.

This having completed the evidence for the prosecution, Mr Urquhart, advocate-depute, addressed the jury for the crown; after which Mr Crawford, in an ingenious speech, addressed them for the accused, in which he twitted the public prosecutor with discovering mysteries in the case as proved by himself, and most unwarrantably laying the burden of clearing up those mysteries upon the prisoner,—a course he had no right to take. The case, as now made out by him, turned out a very different one from what it was put at first. In the previous evidence, he had endeavoured to make out a case of kicking; now he wished to have all that evidence left out of view, and that they should look entirely at the case as made out by the medical gentlemen, who discarded the notion altogether of the woman having been wounded by a kick. No mark of a kick could be traced, and the medical gentlemen said if such a kick had been inflicted, it would have been marked upon her person outwardly, and this alone was sufficient to break up the prosecutor's case. Was there any denial or concealment of the knife found on the prisoner, or was there any the slightest evidence that he had used that knife on that day or any other day, or of any ill-feeling or malice entertained by him to his wife, except a petty altercation at the beginning of the evening? The presumption from the previous frantic declaration of the deceased was rather that she had inflicted the wound herself; at all events she never

blamed the prisoner with *cutting* her, and did not seem to believe herself seriously injured. All the prisoner was said to have done was not proved to have been sufficient to kill his wife, and what by competent evidence is declared to have killed her was not proved to have been done by him.

The Lord Justice-Clerk, in a clear and able address of three hours, commented upon the different parts of the evidence, and explained to the jury, that if there was any mystery as to the main fact of the case, viz. the guilt of the prisoner, of course it was their duty to give the prisoner the benefit of that doubt, and to acquit him. The charge as now put was not, it must be admitted, as at first stated, a charge of murder by kicks; but still the jury were bound to decide the case on the evidence, and the connexion the prisoner was proved to have with the whole circumstances of the case.

The jury retired, and were absent about half an hour. On their return, the chancellor intimated that they had by a large majority found a verdict of " Not Proven."

With this verdict I perfectly agree. Considering the defective nature of the evidence, and the plausible defence of the panel, they could not (giving the prisoner the benefit of any doubt) properly arrive at any other. But whilst I thus concur with the deliverance of the jury, there are several points of doubt which led them to this decision which require a few observations; and to these it is my intention now briefly to advert.

1*st*, *Was this wound accidental?*—This question, although a very natural one, is scarcely deserving a moment's consideration. The circumstance of Mrs Clark having never once alluded to such an accident is of itself almost sufficient to negative this supposition. The possibility of such an occurrence was not, however, entirely overlooked by the counsel both for the crown and the prisoner; and one of the questions put to me was, whether persons in a state of intoxication may not be seriously injured without being conscious of their condition ? It must of course be admitted that persons much intoxicated have sustained serious injuries without being conscious of their nature or severity. For example, the following case came under my own observation two years ago :—A stout healthy man in a state of intoxication, while dancing in a tavern near the canal-basin, tripped himself and fell on the floor. When lifted to a seat, his foot was observed to be turned to one side. One of his companions, supposing it to be dislocated, gave it a pull and easily replaced it. In less than an hour afterwards, he walked home without feeling almost any uneasiness. When within a few yards of his lodgings, he had to go off the pavement to cross the street, and while doing so found his foot again go out of its place. He was assisted home by the police, and I was called upon to visit him, when I found that the tibia was fractured about four inches above the ankle,

with the fibula entire. The distance which he walked after the bone was first reduced was nearly three quarters of a mile.—But while many such instances might be adduced in illustration of the fact that persons may be seriously injured while in a state of intoxication without knowing it, it is equally true, on the other hand, that persons in the same condition often imagine themselves seriously injured from the most trifling accidents; so that, were it contended that the wound in the *vulva* of Mrs Clark was produced by accident, and she, being intoxicated at the time, was unconscious of the mode in which it was inflicted, and of its dangerous nature, one would be equally justified in supposing that, had she really been injured in this way, she would immediately have given the alarm, and made more noise about it than the occasion required. The latter is the view I am inclined to adopt; for, while the former may be entertained in regard to fractures, dislocation, and other injuries where the integuments are entire, there can be no doubt that where blood appears alarm is more easily excited. It is therefore very improbable that this woman, when she saw her clothes streaming with blood, and saw pools of it upon the floor, would not have directed the attention of the inmates of the house to the real nature of the injury, and pointed out the place, and the article which had produced it. The fact of her having sufficient sense left to induce her to go to the kitchen for assistance, when she observed the blood flowing, shows that she was not so drunk as to be unable to give an account of the manner in which the accident had occurred. But all chance of its being an accident is set aside by the fact that there was nothing in the room that could produce such an injury. The chamber-pots, the beds, the chairs, and, in short, every article of furniture in the apartment, were examined by the procurator-fiscal and myself, and nothing discovered which could produce a wound of the same appearance.

2d, Was the wound suicidal ?—This being a more probable occurrence than the preceding, and as it was the opinion adopted by the counsel for the prisoner at the trial, it is deserving of a more careful consideration.

It has already been mentioned, that Professor Simpson stated, in answer to a question put by the Court, " that it was very improbable that the woman had inflicted the wound herself;" and in answer to the same question I replied, " that I considered it impossible, or at all events so difficult as almost to amount to an impossibility," and to this opinion I still adhere. Its improbability depends chiefly upon the place selected for the wound being most unnatural. Universal experience is against the supposition that such a situation would be chosen for the purpose of suicide. Wounds resulting from suicide inflicted by edged instruments are generally confined to the chest, throat, arm, or abdomen. In the latter they are rare. In all cases a blood-

vessel or a vital organ appears to be aimed at. If Mrs Clark, therefore, did commit suicide, she appears to have been the first to strike a blow at hazard. Her anatomical knowledge could not be such as to guide her with precision to the internal pudic artery, the only blood-vessel of importance that could be readily reached by the knife; and if her intention was to injure the uterus, she must be supposed to have had a more accurate knowledge of her parts than to direct the weapon against the pubes. But, keeping in view the appearance and direction of the wound, it is almost impossible that she could inflict it herself. It ran downwards and inwards from left to right, and gradually became deeper as it descended. Its appearance was such as to leave no doubt on the minds of all who were present at the *post mortem* examination, that the incision had commenced above and terminated below the arch of the pubes somewhat abruptly. Now, if correct in this supposition, she could only inflict it in one of the two following ways, both of which are exceedingly difficult. The labia must have been separated by the fingers of the left hand, while the right, holding the knife, must either have passed outside and underneath the right thigh, or come so closely in contact with the left hand between the thighs as to have deprived her of the power of inflicting such a wound. The labia in this woman were peculiarly large, and the part where the wound was situated unusually deep. The nymphæ were equally prominent and overlapped each other, so as to shut up the entrance to the vagina; so that their separation was indispensable for accomplishing the object, whether the wound was inflicted by the woman herself or by a second party, or some of the parts must have been injured.

With a view of reconciling this situation of the wound with the idea of its being the woman's act, it was attempted to be proved that she was left handed, and one witness actually swore to this, but it was not corroborated by the evidence of a second party. Had it even been proved, it would not have removed the difficulty which stood in the way of a satisfactory explanation; for, whilst it would explain why the wound was on the left side of the orifice of the urethra, it left the fact of the wound having commenced above and terminated below in the same obscurity as before. The supposition that she committed the act in the passage is equally untenable. The reason advanced in support of this view was, that only one stream of blood was observed on the floor of the passage, whereas, had she been cut before leaving the room, there must have been two, the one produced in going to the kitchen, and the other on returning. Had the blood been flowing in a continuous stream, and not impeded in its course by any part of her dress, there might have been some ground for this opinion; but when it is recollected that it was merely dropping irregularly from her saturated clothes—that the passage

was so narrow that she could not deviate above a few inches on her return from the track in which she went to the kitchen, and that it was not observed at all till a considerable time had elapsed, and after several persons had rendered it more indistinct by trampling upon it, it is very unlikely that any one could tell accurately whether there were one or two streams observable on the floor of the passage. And is it probable that, after inflicting upon herself a wound which she considered mortal, she would immediately request the inmates of the house to come to her assistance, and, with the view of immediately passing into eternity, state in their presence that her husband had "kicked her, and that she could not live?" A most important part of the evidence, which cannot be overlooked, was, that after this she never left the room in which she expired, and consequently had no opportunity of disposing of the knife or other instrument with which she had inflicted the wound, and it must have been discovered during the search that was made for it.

3d, *Was the wound inflicted by a second party?*—If it was neither *accidental* nor *suicidal*, no alternative is left but to answer this in the affirmative; and the party most closely associated with the act was the woman's own husband. The reasons in support of such an opinion are,—*first*, Mrs Clark's dying declaration that he was the cause of her death; *second*, the opportunity he enjoyed of committing the deed; *third*, the circumstance of his suddenly and unobservedly leaving the house the moment she gave the alarm; *fourth*, the falsehood of his declaration.

It is true that the dying woman never blamed her husband with cutting or stabbing her, and this circumstance might in some measure remove the idea of his being the guilty party. But it is also true that no one is entitled to infer, from the vague statement "kicked in the belly," that she was kicked in the private parts. Different statements appear to have been given at different times, for two witnesses swore that she said that "she was kicked in the lower part of the belly." The ill defined manner in which she expressed herself as to the situation and nature of the injury, coupled with the unvarying declaration that "she could not live," justifies the supposition that she had a perfect knowledge of her condition, and only refrained from disclosing it from a feeling of delicacy. She never once hinted that she was going to have a miscarriage, an idea which all in the house seemed to entertain and act upon; and even had she been conscious of such an event, there was nothing in it to cast such a gloom or presentiment of death over her mind. She had before had several abortions, and recovered perfectly in them all. There was therefore nothing particular in this which she had to dread; and the only explanation which can be given of her silence is, that the situation of the wound was such that she could not mention it. Her dying declaration that her

husband was the cause of her death, and an appeal she made to himself on his return to the house, "Samuel, you've been a kind man to me, but it's all over now," cannot be set aside as referring to nothing, which they must do if her statement were received literally, for not the slightest trace of a kick could be discovered.

If the witnesses had been more precise as to time, it would have been more evident than was brought out on the trial, that the period when Clark and his wife quarrelled, and he was seen by his daughter to have kicked *at* her, and that when she called for assistance, were quite distinct. Nearly half an hour had elapsed, during which time they appeared in friendly conversation, and, as has been previously stated, were sitting on the foot of opposite beds. *The daughter at this time was out of the room*, and did not return till her father had gone out and the neighbours had been called in to her mother's assistance; and on coming in and finding all in a bustle, she inquired at her mother what was the matter, when Mrs Clark replied, "Your father has kicked me, and I can't live." Blood was then observed upon the floor. The petty quarrel which the parties had on a previous part of the evening had been forgotten—a very improbable circumstance had blood continued to flow during the whole half hour which had elapsed.

In reference to the remaining three circumstances alluded to in support of Clark being the murderer of his wife, it is unnecessary to offer any observation by way of illustration. A wound in a concealed part is always admitted as presumptive evidence of murder. Now, if the situation of the two beds on which Clark and his wife were sitting, their proximity to each other, and the adaptation of his hand for inflicting such a wound, be considered, no one had so good an opportunity as he had of perpetrating it. There was no one in the room who could do it without Clark's connivance, for he was constantly beside her till the moment she called for assistance; and then how strongly corroborative of his being the murderer is the fact of his instantly disappearing from the house without attempting to sympathize with her or offering to go in search of medical aid. His object in going out, and the place he went to, were not discovered. Every statement in his declaration in reference to the quarrel and in explanation of the blood being about her person was disproved, a circumstance also unfavourable to the prisoner.

It is much to be regretted that an earlier inquiry was not made into the circumstances of this case. One important point in evidence might thus have been obtained. When Clark was apprehended, blood was observed upon his hands and his clothes. This however was at four o'clock in the morning, more than six hours after the wound had been inflicted; and it is possible that,

in lying upon the bed where his wife expired, he might acquire these stains. But had he been taken into custody when he was first seen by the police, shortly after he returned to the house, and traces of blood then discovered, it would have been a most material circumstance in the evidence.

Case of Extensive Congenital Ulceration of the Right Leg. By T. BOSWALL WATSON, M.D., one of the Medical Officers of the Leith Dispensary.

MRS S., the mother of four children, one of whom only is alive, was seized with labour pains of her fifth child at one A. M. of 18th January 1844; the breech presented, and the delivery was somewhat tedious, not being completed until four P. M. the next day. The child was well formed in every respect, and rather above the usual size. The right leg presented the following singular appearance:—On the forepart of the limb, and commencing immediately below the knee, an ulcer, if it might be so termed, extended in nearly a straight line to the ankle; where, crossing the instep, it extended downwards and inwards to the sole of the foot, and forwards to within a short distance of the great toe. The diseased part presented a brownish chocolate-coloured appearance throughout its whole extent, and a serous-looking fluid was secreted from its surface, which was not sensibly raised above the level of the surrounding healthy skin. Towards the instep and plantar surface of the foot, the diseased action seemed to be of a more severe character than on the upper portion of the limb, the inferior part being considerably darker in colour, and the secretion partaking more of the nature of pus. A much greater extent of the limb had also evidently been at one time involved in the disease, as distinct traces of recent cicatrization presented themselves beyond the margin of the part affected at birth. In the sole of the foot, as the process of healing had proceeded in utero, pretty strong bands had been formed, so as to draw the foot somewhat inwards, constituting thereby a very slight degree of varus. From the same cause, also, the great toe was drawn inwards from the adjoining one. The form of the part at birth, in a state of ulceration, bore a marked resemblance to that of the tibia, having its greatest width superiorly, corresponding with the situation of the head of that bone, and narrowing gradually though irregularly as it proceeded downwards. No vascular ramifications could be observed, either in the preternatural formation itself, or in the healthy skin surrounding it.

The infant evinced very considerable pain by screaming and frequently drawing up the limb, but the general health did not

2 Q

seem to be at all affected. The healing of the ulcer proceeded gradually though slowly; the brownish liver-coloured appearance which the diseased part presented, changing first to a lakish hue, and afterwards to a purple tint as it advanced towards complete cicatrization, which in the sole of the foot was not accomplished until about three weeks after birth. Some months, however, elapsed before the part assumed the colour of healthy skin, though the form of the previously diseased portion can still be easily recognised.

All marks of the texture of the skin are commonly classed under the convenient term of *Nævi*, but the above cannot be included in the category, since it differs widely from the general character of this order; it may more properly be considered the remains of a simple ulcer, over which, as regarded the singular colour of the diseased part, the liquor amnii might possibly have exerted some influence. M. Rayer, in his work on Cutaneous Diseases, mentions that the skin has been found primarily defective amongst new-born infants; but he does not state that any case of the kind had ever come under his observation, or the particular appearance which the integuments in such cases presented. He states having had an opportunity of examining an example of extensive vascular nævus of the right fore-arm and hand, not raised above the level of the surrounding skin, and of a violet colour. Five weeks after birth it became affected with inflammation in several places, which all gave way, and became open ulcers. It differed, however, from the case above narrated in not being in a state of ulceration at birth.

It might not be very profitable to speculate on the causes which may give rise to such lesions; but comparatively recent pathological investigations, as will be found by consulting the works of Billard, Rilliet, Barthez, and others, on the diseases of children, have shown that the fœtus in utero is much oftener affected with disease than was at one time supposed. In the still-born fœtus, or in children who die soon after birth, signs of pneumonia, pleuritis, peritonitis, gastritis, and enteritis, are not unfrequently found on dissection. The cutaneous tissue, too, not to mention syphilis, occasionally presents evidence of having been the seat of disease, by the child at birth exhibiting exfoliations of the skin, and ulcers, such as those already referred to, involving the deeper-seated structures. Not a few instances are related in the periodical literature of our profession, of the limbs of the fœtus having sloughed off in utero. Chaussier and Beclard, in the Dict. des Sciences Méd., t. xxxiv. p. 259, allude to cases of this nature which they had seen; and an example somewhat similar was related by Dr Potts of Jersey, in the first number of this Journal. In the third number of the Edin. Journal of Med. Science for July 1826, is a remarkable instance of congenital ulceration of the scalp, related by Dr William

Campbell, lecturer on midwifery. The injured part presented at birth, as in the infant born in my practice, a brownish appearance. The ulcer was the size of a crown piece, became gangrenous, penetrated the longitudinal sinus, and on the eighteenth day after birth destroyed the infant in a few minutes by hemorrhage amounting to about two pounds. This child was a female, and had been born in December 1822; and the same mother gave birth in March 1825 to a male child, who had also on the scalp an ulcer resembling that on her previous child, but it cicatrized; and the little patient died soon afterwards of chronic hydrocephalus.

LEITH, 37, CONSTITUTION STREET,
August 5, 1844.

———

Pregnancy complicated with Ovarian Enlargement. By
SAMUEL SOMERVILLE, M.D., Edinburgh.

THE following case of pregnancy occurring in a woman with considerable ovarian enlargement, may not be uninteresting, and shows how little these tumours occasionally impede the progress of labour, when, as in this instance, the morbid growth is entirely abdominal.

In the autumn of 1839, I saw for the first time Mrs M., then labouring under peritonitis. She had previously consulted and was at the period alluded to under the care of my valued friend Dr Thatcher, for an ovarian tumour of the right side. The pain in the abdomen was entirely confined to the locality in which the enlargement was placed.

The disease had commenced about two years previously, and had gradually increased to a great size, when, from the patient becoming alarmed, she consulted Dr Thatcher, who had ordered for her different preparations of iodine; and it was for an inflammatory attack after the above date that I first saw her. By the application of leeches, the internal use of antimonials, and an antiphlogistic regimen, the symptoms were subdued. I afterwards continued to visit her, and to keep her under the same treatment; and during that time she had several attacks of peritoneal excitement of more or less severity, but which always speedily yielded to the usual treatment. In the early part of summer 1842, she began to complain of morning sickness, accompanied by suppression of the catamenia, and other symptoms of pregnancy. I may mention, that though married for several years she had no family. This want, however, was soon to be supplied. As the usual changes gradually developed themselves, and as the term of pregnancy advanced, two distinct and separate tumours could be felt—the one the uterus, occupying the

left side of the abdomen, while the right was filled with the enlarged ovary. On the 12th January 1843, labour commenced : on examination, the pelvis was found to be entirely free from any part of the tumour : the labour pains continuing good, in a few hours she was delivered of a fine child, weighing to appearance fully eight pounds. The latter stage of the function was more protracted in this case than it would have been in an ordinary labour, as the great abdominal enlargement prevented the usual co-operation of the abdominal muscles with the uterus in expelling the child. The placenta was thrown off naturally ; the woman had an excellent recovery, and nursed the child for twelve months. The ovary has since shown no tendency to increase. This patient, previously to impregnation, menstruated regularly and healthily, showing, as has often been observed by practitioners, that one ovary, when healthy, is sufficient to influence the uterus for the regular appearance of the catamenia, and likewise for performing the function of reproduction. Some years ago I had the privilege, through the kindness of Dr Thatcher, of seeing another case of labour, in which the ovary occupied a great portion of the pelvis. Fluctuation was distinctly felt, and Dr Thatcher resolved to tap the tumour from the rectum ; this was accordingly done, and a considerable quantity of glairy cerebriform matter escaped, which considerably reduced its size ; but the space being still inadequate to admit the transit of the child, it became necessary to perform embryotomy. The patient recovered from the effects of the labour ; but the artificial opening into the rectum continued pervious, and through it, at different times, a discharge of the same aspect as at first afterwards appeared,

This patient died some time subsequently ; and on examination, the enlarged ovary was found to contain a considerable quantity of hair, and also a tooth. It was much inferior in size, however, to the ovary in the former case, but from its position it proved a much more troublesome obstruction to the transit of the foetus.

Case of Congenital Syphilis, with Observations. By WILLIAM
STRANGE, M.D., of Ashton-under-Lyne.

PERHAPS the following case of congenite syphilis, although it may not decide, may be thought not malapropos to the amicable dispute between Dr W. Campbell and Mr Acton, with which the readers of the first two numbers of this Journal are acquainted.*

Mrs F——, a healthy and plethoric woman of about thirty years of age, applied to me on the 13th March 1841, under the

---

* See Numbers I. and II. for May and June.

following circumstances :—She was about eight months advanced in pregnancy of her *third* child ; both of the two former births were premature, one child having been born dead and putrid, the other surviving its birth by only a few hours. On the present occasion she applied to me in order that, if possible, a similar fate might be averted from her present burden. In each of her pregnancies she had enjoyed uninterrupted good health, and had been entirely free from any of those distressing symptoms which often affect women in her state. In fact, she said that "it was her opinion that she was too well to be having children." On the supposition that plethora might be the predisposing cause of premature labour in these cases, I bled her pretty freely ; notwithstanding, she was delivered of a dead child on the 17th, four days after. The child was well formed and quite free from any syphilitic appearances ; it seemed to have been dead about a day or two. I told her to apply to me much earlier in her next pregnancy, which she did. May 4, 1842, I again bled her, she being three months gone of her fourth pregnancy, and still healthy and plethoric ; near the end of the fifth month I again bled her, and again in the middle of the seventh month. At the full time she was delivered of a living child, apparently healthy, but not plump. Six weeks after, the child exhibited indisputable evidence of a syphilitic taint. There were large copper-coloured scaly blotches on the nates, thighs, and genitals, which afterwards spread all over the trunk, arms, and face ; the mucous membrane of the nose was inflamed, and discharged an ichorous mucous fluid ; suffocation was often threatened from the tumefied state of the inner side of the alæ and septum nasi.

The child took the p. hydrarg. c̄. cretâ for about two months, with an interval, and ultimately recovered, and is now well. To the mother, about eighteen pills of blue mass with aloes were given as an alterative. January 4, 1844, I delivered this woman of her fifth child, no previous bleeding or treatment having been had recourse to. It was very healthy, plump, and free from any appearance of syphilitic taint whatever, in which state it now remains. The mother, a very respectable woman, has never had either primary (to her knowledge), and certainly not secondary symptoms in her life. The husband has frequently had gonorrhœa, and had syphilis *previous* to the birth of her *third* child, but how long before could not be remembered. He however was, as he thought, very careful in not communicating the disease to his wife, and believed himself cured of it.

Now, in what manner does this somewhat interesting case bear upon the dispute in question ? Is it contended that a male parent who has at *some time* or other had syphilis, but believes himself cured of it, is capable of communicating a syphilitic taint to the blood or to the *constitution* of a female

parent, in consequence of which the offspring shall be born with indisputable marks of the disease, the mother all the while never exhibiting the slightest trace of it? Of this position the preceding case, if not a proof, is at least a great support. The question arises, however, were the three first births premature, owing to the action of the syphilitic taint of the mother upon the *child*, upon the *uterus*, upon *both*, or upon neither? If we suppose that syphilis, by causing death and putridity of the fœtus only, disposes the uterus to expel its contents, we are perplexed by one child having been born alive, though premature, previously to any of the bleedings or other treatment having been practised. If the action be exerted upon the uterus only, can we suppose that the three bleedings during the fourth pregnancy destroyed this action upon the uterus, and thus enabled the woman to go to the full period? How account, upon that supposition, for the excessive degree of syphilitic disease which affected the child in six weeks afterwards? If neither the uterus nor the fœtus be interfered with by the presence of a syphilitic taint in the mother, as Mr Acton and others seem to affirm (at least to the extent of causing abortion), then how shall we account for the host of cases arising in *private practice*, in which abortion with a dead or syphilitic child, and the fact of one parent having had syphilis prior to or during the gestation of that fœtus, are constantly concurrent? Lastly, if we suppose that both the functions of the uterus and the life of the fœtus are either conjointly or separately interfered with by the existence of a syphilitic taint existing in the blood of the mother during gestation, then we may easily and logically account for all the facts of the preceding and other similar cases.

1st, It cannot be contrary to our established principles of physiology to believe that a male parent, who has had syphilis at some former period, and whose constitution, although no primary symptoms any longer exist, is not cleared of the effects of the poison, may communicate to the female parent a *syphilitic taint*, that is, a morbid condition of constitution similar to that under which he himself labours; which communication is effected by the absorption of the seminal fluid, in which the morbific power exists, by the mother's system, and the subsequent corruption of her own constitution, without of necessity any primary or secondary symptoms having been induced in her.

2dly, If the first proposition be allowed, we know that a contagious disease, as small-pox, may be imbibed by the mother, and, without producing any *appearances* of it in her, may fix itself entirely upon the child, denoted by the existence of the pustules at birth. Consequently, the deposition of the whole of the virus upon the system of the child may be equally effected in the case of syphilis. *3dly*, The more or less early period of gestation at which this morbific power is

communicated to the fœtus, or perhaps the more or less early period at which the continued deposition of such power shall have arrived at a certain height, will determine the period at which abortion may take place ; either in consequence of the morbid action of the uterus, or of the disease or death of the fœtus. And, 4thly, It is quite possible that this morbific influence may be expended successively upon several fœtuses, or that the whole of it may be exhausted upon one, in such manner, that the mother's system being now freed from it, without medical treatment, a healthy and living child may at length be produced.

In concluding these observations, I wish to bear testimony to the industry and zeal with which Mr Acton pursued his observations in the Venereal Hospital of Paris under M. Ricord and his colleague, during my own studies there ; at the same time I am convinced that some years of extended private midwifery practice will induce him to change his present opinions. The cases of prostitutes cannot, I imagine, satisfactorily settle this question, because abortion in them is so common a thing, and is so often brought about by the action of other causes than the existence of a syphilitic taint in their constitution. Neither can he rely upon their evidence as to when they had the disease, or if they had it at all, and whether cured or not. That Dr Campbell's views are just I will not arrogantly assert ; but I am as convinced of it as it is possible for one to be upon a question which admits of so much argument on both sides.

Part II.—REVIEWS.

A Bill for the better Regulation of Medical Practice throughout the United Kingdom. (Prepared and brought in by Sir James Graham and Mr Manners Sutton.) Ordered by the House of Commons to be printed, 7th August 1844.

We sacrifice several reviews prepared for this number for the purpose of laying before our readers an exact transcript of the new Medical Reform Bill, as read a first time on the 7th of August in the House of Commons, and ordered to be printed. To the loud and long outcry for medical reform, not always we suspect with the self-same objects on the part of all who joined in it, a response is at last made by the introduction of a bill into Parliament by a minister of the crown. This bill, brought in by the Home Secretary and Mr Manners Sutton, appears to have swallowed up, with the consent of the authors, the two embryo bills which preceded it. Mr Warburton and Mr Hawes, the respective authors of the former bills, neither of which long survived the stage of printing, both expressed in the debate their satisfaction with the general features of the new bill ; and Mr Macaulay seconded the motion for the first reading.

It is Voltaire who says, when a Frenchman and an Englishman agree they are sure to be in the right. Here we have Conservative, Whig, and Whig-Radical members—unwonted sight!—concurring in praise of a measure. We, however, are of a cautious temper, and like to judge for ourselves after sleeping and waking on such a subject. The new measure proposes less of a radical reform than either of the two former, which did indeed smack a little of annual parliaments and universal suffrage. The Home Secretary's bill rejects the idea which, under all kinds of circumstances, has so often proved abortive in our times, that of expecting the immediate correction of evils by a constitution framed on paper, however well considered, and, borrowing from the dear-bought experience of the political world, it seeks to rear up a new order of things in the province of medicine merely by retrenching some parts of the old system, and infusing a fresh spirit into such parts of it as are to be retained. Without further comment we leave the bill in the hands of our readers.

[Note.—The Words printed in *Italics* are proposed to be inserted in the Committee.]

WHEREAS it is for the good of all her Majesty's subjects that the knowledge of physic and surgery should be promoted, and that means should be afforded whereby those who have been examined and found skilful by competent authority may be known from ignorant and unskilful pretenders to the same knowledge : And whereas the laws now in force concerning the profession of physic and surgery require to be amended, Be it enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, that an act passed in the third year of the reign of King Henry the Eighth, intituled, " An Act for the appointing of Physicians and Surgeons ;"[1] and also another act passed in the fifth year of the same reign, intituled, " An Act concerning Surgeons to be discharged of Quests and other Things ;"[2] and also another act passed in the session of Parliament holden in the fourteenth and fifteenth years of the same reign, intituled, " The Privileges and Authority of Physicians in London ;"[3] and also two acts passed in the thirty-second year of the same reign, respectively intituled, " For Physicians and their Privilege,"[4] and " For Barbers and Surgeons ;"[5] and also another act passed in the session of Parliament holden in the thirty-third and thirty-fourth years of the same reign, intituled, " A Bill that Persons being no common Surgeons may minister Medicines, notwithstanding the Statute ;"[6] and another act passed in the first year of the reign of Queen Mary, intituled, " An Act touching the Corporation of Physicians in London ;"[7] and also an act passed in the session of Parliament holden in the sixth and seventh years of the reign of King William the Third, intituled, " An Act for exempting Apothecaries from serving the Offices of Constable, Scavenger, and other Parish and Ward Offices, and from serving on Juries ;"[8] and so much of every other act as continues the last-recited act ; and also an act passed in the tenth year of the reign of King George the First, intituled, " An Act for the better viewing, searching, and examining of all Drugs, Medicines, Waters, Oils, Compositions, used or to be used for Medicines, in all places where the same shall be exposed for Sale, or kept for that purpose, within the city of Lon-

---

[1] 3 Hen. VIII. c. 11.—[2] 5 Hen. VIII. c. 6.—[3] 14 & 15 Hen. VIII. c. 5.—[4] 32 Hen. VIII. c. 40.—[5] 32 Hen. VIII. c. 42.—[6] 34 & 35 Hen. VIII. c. 8.—[7] 1 Mary, Sess. ii. c. 9.—[8] 6 & 7 Will. III. c. 4.

don and Suburbs thereof, or within Seven Miles circuit of the said City "[1] and so much of another act passed in the eighteenth year of the reign of King George the Second, intituled, " An Act for making the Surgeons of London and the Barbers of London two separate and distinct Corporations,"[2] as does not relate to the separation of the said corporations, or to the master, governors, and commonalty of the Mystery of Barbers in London ; and also so much of an act passed in the fifty-fifth year of the reign of King George the Third, intituled, " An Act for better regulating the Practice of Apothecaries throughout England and Wales,"[3] as relates to the examination of apothecaries, or to the qualifications of persons intending to be examined or to qualify themselves under that act to practise as an apothecary, or to the fees to be paid by apothecaries for the certificate of the court of examiners, or to the penalties for practising as an apothecary without having obtained such certificate ; and also so much of an act passed in the sixth year of the reign of King George the Fourth,[4] as enacts, that all members and licentiates of the Royal College of Physicians in London actually practising ; all surgeons being members of the Royal Colleges of Surgeons in London, Edinburgh, or Dublin, and actually practising ; all apothecaries certified by the court of examiners of the Apothecaries' Company, and actually practising, shall be freed and exempt from being returned, and from serving upon any juries or inquests whatsoever, and shall not be inserted in the lists to be prepared by virtue of that act ; and also so much of any act or charter granted before the *passing of this Act* as prohibits any person from practising physic or surgery in any place without such license as is mentioned in such act or charter respectively, or as imposes any restriction on the practice of physic or surgery other than is contained in this act, shall be repealed and annulled.

And be it enacted, that a council shall be established, which shall be styled " The Council of Health and Medical Education ;" and that one of her Majesty's principal secretaries of state shall be a member of the said council, in right of his office as secretary of state ; and that the regius professor of medicine in the University of Oxford, the regius professor of physic in the University of Cambridge, the regius professor of physic in the University of Dublin, the regius professor of clinical surgery in the University of Edinburgh, and the regius professor of surgery in the University of Glasgow, shall be members of the said council in right of their several professorships ; and that the other members of the said council shall be *one* physician and *one* surgeon, to be chosen by the Colleges of Physicians and Surgeons of England respectively ; *one* physician and *one* surgeon to be chosen by the Colleges of Physicians and Surgeons of Scotland respectively ; *one* physician and *one* surgeon to be chosen by the Colleges of Physicians and Surgeons of Ireland respectively ; and *six* other persons whom her Majesty, with the advice of her privy council, shall deem fit to be members of the said council.

Provided always, and be it enacted, that it shall be lawful for her Majesty, with the advice of her privy council, to appoint all the members of the first Council of Health and Medical Education, other than those who will be members thereof in right of their several offices ; and that at the end of the *third* and each of the *two* next following years after the first constitution of the said council, *one* physician and *one* surgeon of those first

---

[1] 10 Geo. I. c. 20.—[2] 18 Geo. II. c. 15.—[3] 55 Geo. III. c. 194. —[4] 6 Geo. IV. c. 50, s. 2.

appointed on behalf of the said several colleges of physicians and surgeons, shall go out of office, in such order as her Majesty, with the advice of her privy council, shall direct.

And be it enacted, that those members of the said council who are members in right of their several offices shall continue to be members thereof so long as they hold the same offices respectively, and no longer, and the *six* members of the said council, appointed as aforesaid by her Majesty with the advice of her privy council, shall continue to be members of the said council during her Majesty's pleasure, and upon every vacancy among the last-mentioned members of the said council, and their successors, it shall be lawful for her Majesty, with the advice of her privy council, to appoint another fit person to be a member of the said council during her Majesty's pleasure.

And be it enacted, that upon every vacancy among the members of the said council appointed on behalf of the said several colleges of physicians or surgeons, and their successors, the Royal College of Physicians or Surgeons of England, Scotland, or Ireland, as the case may be, shall appoint another physician or surgeon, as the case may be, to supply such vacancy, subject to the approval of her Majesty ; and every member of the council so chosen shall be entitled to be a member of the said council for *three* years, and shall then go out of office, but may forthwith be re-chosen, subject to her Majesty's approval : provided always, that no president, vice-president, or examiner of any of the said colleges shall be qualified to be so appointed.

And be it enacted, that the manner of choosing the last-mentioned members of the said council shall be determined in each case by orders or byelaws to be made from time to time by the said several colleges, subject to the approval of the Council of Health and Medical Education.

Provided always, and be it enacted, that it shall be lawful for any member of the said council appointed by her Majesty, or chosen by any of the said colleges, at any time to resign his office, or for her Majesty at any time, with the advice of her privy council, to dismiss any such member of the said council for notorious misbehaviour or unfitness ; and upon any vacancy in the said council by death, resignation, or dismissal, another member of the council shall be appointed in the same manner and for the same term as the member by whom the vacancy shall have been made.

And be it enacted, that it shall be lawful for the said council, with the approval of one of her Majesty's principal secretaries of state, to appoint a principal secretary for the said council, and also local secretaries for Scotland and Ireland, and so many clerks and messengers, as the said secretary of state shall deem necessary, and also with the like approval to remove at their pleasure any of the said secretaries, clerks, and messengers, and appoint others in their room.

And be it enacted, that there shall be paid to the members of the said council, and to the said secretaries, clerks, and messengers, such salaries as shall be from time to time allowed by the lord high treasurer or commissioners of her Majesty's treasury, who may also allow such reasonable travelling expenses which may have been incurred by any member of the said council, or any secretary, clerk, or messenger in the performance of his duties under this act, and such other reasonable expenses of putting this act into execution, as the said lord high treasurer or commissioners of her Majesty's treasury shall think fit.

And be it enacted, that the said secretary of state shall be president of the said council, and shall be empowered from time to time to nominate

one of the members of the council appointed as aforesaid by her Majesty to be vice-president of the council, and to act as president in his absence ; and at every meeting of the council, in the absence of the president and vice-president, some other member to be chosen by the council from the members then present shall be empowered to act as president.

And be it enacted, that the said council shall be holden in such places and at such times as the secretary of state from time to time shall appoint ; and that all acts of the council shall be decided by the votes of the majority of the members present at any meeting, the whole number not being less than *seven ;* and at all such meetings the president for the time being shall have a second or casting vote in all cases of equality of votes.

And be it enacted, that minutes of the proceedings at all meetings of the council shall be drawn up and fairly entered in books, to be kept for that purpose ; and such minutes shall be at all reasonable times open to the inspection of any person or committee appointed for the purpose of inspecting them by any of the said universities or colleges.

And be it enacted, that a register shall be kept and published from time to time, under the direction of the said council, of all persons who shall have been examined, and shall have received, and shall exhibit before the said council letters testimonial, as hereinafter mentioned, of their qualification to practise as a physician, or as a surgeon, or as a licentiate in medicine and surgery ; for which registry the council shall be entitled to have from the person requiring to be registered a fee of *five pounds* in the case of a physician or surgeon, and a fee of *two pounds* in the case of a licentiate, which fees shall be applied toward defraying the expenses of this act ; and every person whose name shall be so registered, who shall be desirous that his name shall be continued in the published register, shall in the month of *January* in every year send to the said council his name and place of abode, with the date of his testimonials, and the council shall verify the returns so made to them by comparison with the register kept by them, and shall forthwith cause the names of all persons duly registered, and so returned to them, to be published in alphabetical order in their several classes, with their several places of abode, and dates of their testimonials.

And be it enacted, that no person, except such graduates in medicine and such other legal practitioners as are hereinafter mentioned, shall be entitled to be registered by the council as a licentiate in medicine and surgery unless he shall have attained the age of *twenty-one* years, and shall have been examined by the colleges hereinafter named ; (that is to say) if in England, examined by the Royal College of Physicians of England, assisted by the Court of Examiners of the Apothecaries' Company, and also examined by the Royal College of Surgeons of England ; and if in Scotland, examined by the Royal Colleges of Physicians and Surgeons of Scotland ; and if in Ireland, examined by the Royal Colleges of Physicians and Surgeons in Ireland ; and in every case shall have received letters testimonial from each of the bodies by which he shall have been examined, of his being duly qualified to practise as such licentiate.

And be it enacted, that no person, except such legal practitioners as are hereinafter mentioned, shall be entitled to be registered by the council as a surgeon unless he shall have attained the age of *twenty-five* years, and shall have been examined by one of the Royal Colleges of Surgeons of England, Scotland, or Ireland, or the Royal College of Physicians and Surgeons of Glasgow, after such proof as shall be satisfactory to the examining college that he has applied himself to surgical studies during at least *five* years ;

and shall have received letters testimonial from the examining college of his being duly qualified to practise as a surgeon.

And be it enacted, that no person, except such legal practitioners as are hereafter mentioned, shall be entitled to be registered by the council as a physician unless he shall have attained the age of *twenty-six* years, and shall have graduated in medicine in some university of the United Kingdom of Great Britain and Ireland, or, subject to the restriction hereinafter contained, in some foreign university, and shall also have been examined by one of the Royal Colleges of Physicians of England, Scotland, or Ireland, or by the Royal College of Physicians and Surgeons of Glasgow, after such proof as shall be satisfactory to the examining college that he has applied himself to medical studies during at least *five* years, or if he is not a graduate in medicine of any such university, unless he shall have attained the age of *forty* years, and shall have been examined by the Royal College of Physicians of England ; and in each case shall have received letters testimonial from the examining college of his being duly qualified to practise as a physician ; and no person shall be entitled to be received for examination for the purpose of being so registered as a physician upon a foreign degree in medicine, unless the Royal College of Physicians of England, Scotland, or Ireland, shall give him a special certificate, to be laid before and approved by the Council of Health and Medical Education, that they have made inquiry into the manner in which such degree was conferred, and have ascertained that it has been granted after residence within the precincts of the same university during at least *one year*, and after due examination and upon satisfactory certificates of previous study.

And be it enacted, that it shall be lawful for the same person, if possessed of the necessary testimonials, to be registered as both physician and surgeon, and for a registered physician, or a person applying to be registered as a physician, to offer himself for examination as a licentiate in surgery by one of the said Royal Colleges of Surgeons, and for a registered surgeon, or a person applying to be registered as a surgeon, to offer himself for examination as a licentiate in medicine by one of the said Royal Colleges of Physicians, assisted in England by the Court of Examiners of the Apothecaries' Company ; and every such physician or surgeon shall be entitled to be also registered upon the testimonials granted to him upon such additional examination, in such form and manner as shall be determined by the said council.

And be it enacted, that every person registered after examination as a physician or surgeon under this act, shall be admitted as an associate of the Royal College of Physicians, or as fellow of the Royal College of Surgeons from which he shall have received his letters testimonials as physician or surgeon, or if he shall have received the said testimonials from the Royal College of Physicians and Surgeons of Glasgow, then as a fellow of the last-mentioned royal college ; and every such physician and surgeon who shall afterwards remove from that part of the United Kingdom in which he obtained his letters testimonial, shall be required, if he shall practise as a physician or surgeon in any other part of the said United Kingdom, to enroll himself as an associate of the Royal College of Physicians, or as a fellow of the Royal College of Surgeons, of that part of the United Kingdom to which he shall so remove, for the purpose of practising there, according to the nature of his testimonials, and in each case shall be entitled to be so admitted without further examination, and on payment of the like fees of admission, and on complying with the same conditions as are required of

other persons who have passed their examinations for the purpose of being admitted associates or fellows of the said colleges respectively.

And be it enacted, that the said several colleges shall, from time to time, when required by the said council, prepare and lay before the said council a scheme or schemes of the course of study and particulars of the examination to be gone through by all persons applying to such colleges respectively for letters testimonial as physician, or surgeon, or licentiate, and of the fees to be taken for examination and admission into the said several colleges respectively ; and the said council shall be empowered to make from time to time such changes in any of the schemes so laid before them as to the said council shall seem expedient ; and the said council shall endeavour to procure, as far as is practicable and convenient, that the qualifications and fees for the said testimonials shall be uniform, according to the nature thereof throughout the said United Kingdom.

And be it enacted, that after the *passing of this act* it shall not be lawful for any university of the said United Kingdom to confer any degree in the faculty of medicine upon any person, unless he shall have been matriculated in the same university, and shall have duly attended the courses of public lectures prescribed by the same university to students in medicine within the precincts of the same university, or of some medical school recognised by and in connexion with the same university, during at least *two* years next before the granting of such degree, and shall have been examined at some time before granting such degree by the proper examiners of such university, and found by them to possess competent skill and knowledge of medicine, and of the sciences connected therewith, and of the English and Latin languages at least ; and every diploma or certificate of a medical degree granted by any such university after the *passing of this act*, shall set forth distinctly the time which has elapsed since the matriculation of the person to whom such degree shall be granted, and the time during which, and place at which he shall have actually studied as aforesaid, and the fact that he has passed such examination as last aforesaid.

And be it declared and enacted, that it shall be lawful for any university of the said United Kingdom to grant the degree of bachelor in the faculty of medicine, subject to the restrictions hereinbefore contained concerning medical degrees, to any student of the same university who shall have attained the age of *twenty-two* years ; and that every such graduate in the faculty of medicine, being also examined and having received letters testimonial of his qualification in the manner hereinbefore prescribed in the case of licentiates in medicine and surgery, or examined and furnished with the like letters testimonial by the Royal College of Physicians and Surgeons of Glasgow, if the said degree shall have been granted by the University of Glasgow, shall be entitled to be registered by the said Council of Health and Medical Education as a licentiate in medicine and surgery, subject to such general regulations as shall be made by the said council concerning the registry of licentiates.

And be it enacted, that no bye-law to be made by any of the Royal Colleges of Physicians or Surgeons of England, Scotland, or Ireland respectively, or by the Royal College of Physicians and Surgeons of Glasgow, shall be of any force until a copy thereof, sealed with the seal of the same college, shall have been laid before and approved by the said Council of Health and Medical Education.

And be it enacted, that it shall be lawful for the said council to make

regulations for ensuring the registry of all medical and surgical students by the proper officers of the several hospitals or medical or surgical schools at which they shall study, and to authorize such officers to take a fee for such registration, not being more in each case than *ten shillings*, and for requiring all such fees to be remitted to the secretary of the said council, and returns to be made to them of the registration of all such students, in such manner and form as the council shall think fit; and no hospital or medical or surgical school shall be recognised by any of the said colleges, which shall neglect or refuse to give due effect to such regulations, after notice of such neglect or refusal shall have been sent by the said council to the said colleges, until the default of such hospital or medical or surgical school be amended to the satisfaction of the said council, and all such fees shall be applied toward the expenses of this act.

And be it enacted, that where by this act it is provided that the concurrence of more than one body is required for qualifying any person to be registered by the said council, the examination before such bodies for his degree or letters testimonial, or both, may be conducted either separately before examiners appointed by each body, or before a joint board of examiners, to be appointed by each body separately or conjointly, who shall be appointed in such number, manner, and form, and shall hold their examinations at such times and places as such bodies shall, with the approval of the said council, agree from time to time among themselves, or as shall be determined by the said council with respect to any point in which they shall not be agreed; and where there shall be separate examinations before examiners appointed by each body, the subjects and fees of examination shall be divided among such bodies as they shall from time to time agree among themselves, or as the said council from time to time shall determine with respect to any subject on which they shall not be agreed.

And be it enacted, that the said council may from time to time require returns to be made in such form, and including such particulars, as they shall think fit, respecting the examinations to be conducted as aforesaid, and it shall be lawful for any secretary of the said council, deputed by the council for that purpose, or for any member of the said council, to be present at any of the said examinations; and if the council shall be of opinion that the regulations prescribed by them for the examination and grant of letters testimonial as physician, surgeon, or licentiate, have been infringed, evaded, or neglected by any of the said examining bodies, it shall be lawful for the said council to refuse to register upon the testimonials of the body so in default, until the same be amended to the satisfaction of the said council.

And be it enacted, that, subject to the reservations hereinafter contained, no person, after the *passing of this act*, who is not registered by the said council, shall be appointed to any medical or surgical office in any public hospital, prison, infirmary, dispensary, workhouse, or other public institution in the said United Kingdom, or to any medical or surgical office in her Majesty's army or navy, or in the service of the Honourable East India Company, except in India, natives of India duly qualified according to such laws or regulations as are or shall be made in that behalf by the governor-general in council; and wherever by law it is provided that any act shall be done by a physician or surgeon, or medical or surgical practitioner, by whatever name or title he is called, such provision shall be construed, after the *passing of this act*, to mean a person qualified to be appointed to such medical or surgical offices as aforesaid; and the Council of

Health shall be empowered from time to time to make regulations for specifying what institutions are to be considered public institutions within the meaning of this act, and which form of testimonial shall be necessary to qualify the holder thereof for every such situation.

And be it enacted, that all persons who are registered by the said council as physicians, surgeons, or licentiates, shall be exempt while practising as such from being summoned or serving on all juries and inquests whatsoever, and from serving all corporate, parochial, ward, hundred and township offices ; but, subject to the reservations hereinafter contained, no person shall be entitled to such exemption, on the ground of his practising medicine or surgery, who is not so registered, nor shall the certificate of any such unregistered person, given after the *passing of this act*, be received as the certificate of a medical or surgical practitioner in any court of law, or in any case in which by law the certificate of a medical or surgical practitioner is required.

Provided always, and be it enacted, that it shall be lawful for the said council, on the application, within *twelve* calendar months after the *passing of this act*, of any person legally practising as a physician, surgeon, or apothecary, at the time of the *passing of this act*, in any part of the United Kingdom of Great Britain and Ireland, or on the application within *two* years of any person so legally practising in any of her Majesty's colonies and foreign possessions, to cause the name of such person to be registered as a physician, surgeon, or licentiate in medicine and surgery, as the case may be, on production to the said council of his diploma, license, or certificate, or such other proof as shall be satisfactory to the said council, that at the time of the *passing of this act* he was legally entitled to practise as a physician, surgeon, or apothecary, as the case may be, in some part of the said United Kingdom, and on payment of a fee of *two pounds* in the case of fellows or associates of the said colleges of physicians and surgeons respectively, and of *five shillings* in every other case, which fees shall be applied towards the expenses of this act ; and during the said period of *twelve* calendar months every person legally practising as a physician, surgeon, or apothecary at the time of the *passing of this act* in the said United Kingdom, and during the said period of *two* years, every person so legally practising in any of her Majesty's colonies and foreign possessions, although not registered, shall continue to enjoy the same privileges and exemptions, and be qualified to be appointed to the same offices, and to practise in the same manner as if this act had not been passed, and no farther or otherwise, unless registered under this act.

And be it enacted, that every person appointed after the *passing of this act* to any medical or surgical office for which he is not qualified according to the provisions of this act, and the regulations of the said council, and who shall act or practise in such office, shall for every such offence forfeit the sum of *twenty pounds*, to be recovered by action of debt, or information to be brought in any of her Majesty's Courts of Record at Westminster, or in the Court of Exchequer in Scotland, or in Dublin, within *six calendar months* next after the commission of the offence, and to be recovered in the name of her Majesty's attorney-general in England or Ireland, or of the lord advocate in Scotland.

And be it enacted, that after the *passing of this act*, no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or operation, or for any medicine prescribed or administered, unless he shall prove upon the trial, either that he is regis-

tered under this act, or that he was legally practising in the capacity in which he claims such charge before the passing of this act.

And be it enacted, that every unregistered person who shall wilfully and falsely pretend to be, or take or use any name or title implying that he is registered under this act, shall be deemed guilty of a misdemeanour in England and Ireland, and in Scotland of a crime and offence, and being convicted thereof, shall be punished by fine or imprisonment, or both, as the court before which he shall be convicted shall award.

And be it enacted, that this act may be amended or repealed by any act to be passed in this session of Parliament.

———

Cases of Dropsical Ovaria removed by the Large Abdominal Section. By D. Henry Walne, Esq., Surgeon. London, 1843. 8vo. Pp. 66.

Well do we remember the excitement produced among the more influential part of our brethren and their retainers, when the removal of ovarian tumours was first practised in this city ; and equally well do we recollect the obloquy with which the operator and his assistants were assailed. But notwithstanding the very unfavourable reception which the operation in question experienced in those times, we always maintained, and our opinions have been most satisfactorily corroborated by Mr Walne and others, that under particular circumstances the removal of ovarian tumours by an extensive section of the abdominal parietes was as justifiable, and would prove as salutary in its results, as many other surgical operations of a far less formidable character. We are informed, for example, that Dr M'Dowal of the United States laid open the abdominal cavity six times, and that five of his patients recovered. We know that of six women operated on by Mr Lizars of this city, three recovered ; seven out of fourteen operations by Dr Clay of Manchester succeeded ; and, besides the three cases detailed in the work under review, it would appear that Mr Walne operated on two other individuals, and that of the whole four recovered. We are aware of sixty-eight operations of this nature, including two cases by Mr Lizars which had not been published ; and of the whole it would seem that forty-two recovered, being nearly two-thirds of the number operated on.* It would be rather wandering from the design of our present observations, otherwise it could be easily shown from the practice of such of our brethren as devote their time in a more especial manner to the operative department of the profession, that the success of the present operation has fully equalled that of cases of a far less formidable nature.

Mr Walne has proved himself a bold surgeon ; and the fact of so many of his patients having recovered, equally entitles him to be considered a judicious practitioner. But we must not overlook that he had the counsel and assistance of Dr Blundell, one of the most talented men of the age ; and that his patients, if we are to draw any inference from the cases in the publication under review, were in a very favourable condition for operation. We have long been of opinion that when the tumour is very moveable, the constitution sound, the habit spare, and the mind resolute, a practitioner may be sanguine of success ; and we do not consider ascites, if the general health in other respects be good, a discouraging complication.

———

* Dr Churchill's Notes on Ovariotomy, Dublin Journal, No. lxxv., July 1844.

Though from the foregoing observations it may seem that we are in favour of this formidable operation, we wish, however, to be distinctly understood as considering it fraught with danger ; that it should not be undertaken without repeated consultations with men of judgment and experience, nor without an accordance in their opinions that the tumour is ovarian, that it is increasing in size, and that its connexions are neither numerous nor extensive.

The attention in the after-treatment bestowed by Mr Walne on his patients was beyond all praise. The first two had been married ; their ages respectively were fifty-eight and fifty-seven ; the first had had five children and several abortions, but the second had never been pregnant. An unmarried lady of twenty was the subject of the third operation ; and all three enjoyed good health. In all of them the *linea alba* was chosen as the seat of incision, which extended in each respectively thirteen, twelve, and nineteen inches. The right ovarium was involved in the diseased mass in the first patient, and the left organ in the second and third cases. The tumour in the first and third illustrations formed but one cyst, but the pathological condition of the second is not stated. Except by its pedicle, the growth formed no other connexion in any of the cases. In the first example the greatest circumference of the tumour, taken horizontally, was 2 feet $10\frac{3}{4}$ inches ; length, 2 feet 8 inches ; across, 2 feet 4 inches : the tumour in the second case weighed $16\frac{3}{4}$ pounds ; and in the third patient, 28 pounds.* The ligature placed on the pedicle of the tumour in one of the individuals separated ten weeks after operation ; and in another of the cases it was detached in five weeks, while the second ligature in the same patient could not be removed until the sixty-eighth day after she had been operated on. There was in the three patients a considerable degree of gastric derangement and vascular excitement for some days after the removal of the tumours ; and in one of them a slight attack of something resembling phlegmasia dolens, which was subdued by leeches. In all, opiates were exhibited after the patients had been put to bed ; the bladder evacuated for some days by the catheter to prevent the wound being disturbed ; enemata administered when required ; and the antiphlogistic regimen observed for a proper period. From the details it does not appear that any of those cases were succeeded by ventral protrusions, as had happened in some of the patients in whom we witnessed the operation.

From the tenor of the foregoing remarks, Mr Walne must acknowledge our readiness to do justice to his merits ; but we are also bound by our duty to the public not to overlook his faults ; and we therefore regret to observe that he should have been so far misled by his success in the present instance as to indulge in a style so confident and dogmatic as might induce some of his readers to believe that as an ovarian pathologist and operator he has few if any equals. At p. 64, he goes on to state, that " a mistaken idea prevails in some minds that the disease does not tend to shorten life, nor to destroy its comforts. I shall hereafter show that this opinion is totally at variance with facts. Like many other erroneous opinions, it is repeated on authority by men whose position might easily enable them to ascertain that it is devoid of truth. Compilers are apt to follow such men.

* In one of Dr Clay's cases the abdominal incision was 28 inches, and the tumour weighed 73 pounds.—Dublin Journal, ib. Haller relates a case in which the ovarian tumour with the uterus weighed $100\frac{1}{2}$ pounds.—Disputat. Med., tom. iv. p. 449.

in obstetric practice, which is a disgrace, not so much to the profession as to the legislature. Hitherto the proper authorities have withheld from a most useful branch of the medical profession that protection to which it was entitled, by failing to make such wise enactments as would have compelled candidates for public favour to show, by satisfactory proofs, that they have been instructed by properly qualified teachers, and by searching examinations before competent judges, that they are correctly informed in the principles and practice of their profession. It is never too late to do good ; and the government have at last, in consequence of numerous and urgent representations from various parts of the kingdom, been compelled to take the present condition of medical practice into consideration ; and we earnestly trust that the department of Midwifery will receive that share of attention to which it is entitled.

The subject of the case which has given rise to these remarks was a healthy woman, æt. twenty-four, the mother of four children, all of whom were produced during easy labours. On the 22d May 1844, when about three months pregnant, and in the enjoyment of her usual health, symptoms of abortion were induced in consequence of her having lifted a body which must have weighed at least 168 pounds. The following morning about four o'clock, Mr Garland, the actor in the tragic scene which we are about to describe, arrived. *He introduced his hand into the sexual canal, and through its parietes into the abdominal cavity, whence he dragged per vaginam* 19½ *feet of the small intestines.* Mr Jones was now called, and deeming the situation of this unfortunate victim of professional ignorance quite desperate, he left her after having given some directions for palliating her condition ; and strange to relate, *she survived her cruel treatment seventeen days.* This case was recently before the judges and a jury at Cambridge, who convicted the practitioner concerned of manslaughter, and sentenced him to the lenient punishment of one month's imprisonment in the county gaol.

We are afraid to trust ourselves in commenting on the foregoing case, and what is more, our limits will not permit extended observations ; but we promise our readers to recur to the subject. The delinquent must have been utterly ignorant of the natural condition of the female reproductive organs. There is not a student who has attended obstetric lectures with a moderate share of diligence, but must have heard his teacher state, that the introduction of the hand into the vagina dilated but an hour previously by child-bearing, was attended with great uneasiness ; and what must the feelings of the patient be when this canal is distended in early pregnancy by the abrupt intrusion of the hand, without previous preparation by such a process as parturition ?

Among the causes which have contributed to some of the distressing scenes that are occasionally witnessed in the lying-in room, we must not omit to mention that criminal apathy which many of the pupils of a class manifest during their attendance on obstetric instruction ; some of them leaving the schools, and that too dignified with the title of M. D., without having attended a single labour case ; trusting to the confidence inspired, by the license of a college, for future fame and support. But if ignorance on the part of our junior members has led to painful consequences, it is not less certain that among veteran practitioners results equally distressing have arisen from intemperance. In the Sheffield Iris, July 19, 1836, and in the Chester Chronicle, October 5, 1838, cases are reported in which a verdict of manslaughter had been pronounced by a coroner's inquest against two practitioners who, while in a state of

inebriety, by the reckless use of instruments ruptured the uterus and destroyed their patients. But our readers must not suppose that such disgraceful scenes are acted only south of the Tweed ; many have been related to us which happened nearer home, and one of these not long since, where a veteran practitioner, in a state of exhilaration, passed his hand through the uterus, and brought down the intestines to a considerable extent. The patient was in a critical state previously, and after this distressing error she soon died.

Mental Hygiene, or an Examination of the Intellect and Passions, designed to illustrate their Influence on Health and the Duration of Life. By WILLIAM SWEETSER, M. D., late Professor of the Theory and Practice of Physic, and Fellow of the American Academy of Arts and Sciences. Edinburgh, 1844.

THIS work on Mental Hygiene is reprinted from the American edition. It contains a great deal of good sense on some very important topics. It abounds more in allusions to general literature than is common in professional works. This we should hardly regard as a fault on such a subject, even if the book were designed to be confined to medical readers. But since a treatise of this kind should be considered less as a source of information to medical men than as one to be recommended by them to their patients as enforcing some of the most important precepts for the daily management of health, we look on the discursive character of the book as an excellence rather than as a fault.

That medical men, as members of an honourable profession, are bound in duty not merely faithfully to do their utmost to cure diseases when they arise, but also to teach those who repose confidence in them how to avert ill health, we suppose to be a proposition to which all our readers will give their unqualified assent.

We are far from advising that works on diseases should be put into the hands of non-medical persons ; than this hardly any thing can be more pernicious, whether we consider it in the light of the danger of a little knowledge when diseases actually occur, or as a means of suggesting to sensitive minds one of the most effectual of all the arts of self-tormenting.

But to a work of the kind before us being put into the hands of such readers there can be no objection. It touches on many topics which the public are quite competent to judge of, and suggests many precepts which can only be carried into effect by each individual acting for himself. It would be easy to descant at length on the fertile topics suggested by our author,—on the amount of misery and sources of ill-health which individuals might save themselves from by some pains to acquire self-knowledge in the early part of life, and on the degree in which parents might contribute to rescue their children from suffering in after-life by a more perfect knowledge of the modes in which the formation of the moral and intellectual character is to be swayed.

There can be no doubt that serious inroads both upon the present and upon the after health are committed by errors which might easily be avoided in the conduct of education.

It is a prevalent error to commence the school education of children too early. We are not disposed to object to infant-schools, as long as these are confined to the children of the labouring orders of society, because their

education is to terminate sooner, so that their intellect is not to be subjected to continued exertion during the whole period of the development of the bodily frame, and also because, when the parents are engaged all day in labour, the children are better taken care of in such schools than they could be at home.

But when the education of literature or of accomplishment is to be carried on through a long period of years, it stands to reason and is confirmed by experience, that to begin any kind of instruction by letters before six or seven years of age is not merely hurtful to the health, but defeats the object intended by it.

There is a self-education which every child must go through, the greatest and most momentous part of which takes place at a period antecedent to the date of the memory in after-life. During this period the infant must be employed in the most important mental processes, founded on the acute observation of every thing which falls under the cognizance of sense. And even after that portion of the intellectual life has begun which, by the agency of memory, is to be coextensive with the life of the body, the mental operations of the child are still distinguished by the predominance of an acute observation of external things. This is, in short, the period for the training of the senses to that degree of perfection which is to mark them in the individual throughout after-life. The assistance, therefore, which should be given to the child at this important stage of his progress is merely the placing of him amidst objects such as it is desirable he should be minutely acquainted with for his after-pursuits. To engage him in books at this time is to withdraw his attention from the study of things—to blunt his senses in a way that can never afterwards be compensated for,—in short, to injure his intellect and to risk his health without any corresponding advantage. For the child who begins his letters at six years of age quickly overtakes him who began at three.

Let us hear our author on this subject.—" Premature and forced exertions of the mental faculties must always be at the risk of the physical constitution. Parents, urged on by an ambition for their intellectual progress, are extremely apt to overtask the minds of their offspring, and thus, too often, not only defeat their own aims, but prepare the foundation of bodily infirmity and early decay. Such a course, too, is repugnant to the plainest dictates of nature, to be read in the instinctive propensities of the young, which urge so imperiously to physical action.

" Exercise, in early existence especially, is a natural want, being then essential to train the muscles to their requisite functions, and to ensure to the frame its full development and just proportions. So strong, indeed, is this tendency to motion, that few punishments are more grievous to childhood than such as impose restraints upon it. The young, in fact, of all animals of the higher orders, equally display this necessary propensity. Liberate the calf or the lamb from his confinement, and what a variety of muscular contractions will he not immediately exhibit in his active and happy gambols! He is herein but discovering the instincts of his nature, just as much as while cropping the grass and herbage. In tasking, therefore, the functions of the brain, and restraining, consequently, those of the muscles, in early life, we act in contravention to the most obvious laws of the animal constitution.

" I would not, however, be understood to say that the powers of the mind are to be absolutely neglected at this period. They are certainly to be unfolded, but then prudently, and in just correspondence only with

the development of the physical organization. To look for ripeness of intellect from the soft, delicate, and immature brain of childhood, is as unreasonable as it would be to expect our trees to yield us fruit while their roots were unconfirmed and their trunks and branches succulent.

" ' Nature,' says Rousseau, ' intended that children should be children before they are men, and if we attempt to pervert this order we shall produce early fruit, which will have neither maturity nor savour, and which soon spoils : we shall have young learned men, and old children. Infancy has an order of seeing, thinking, and feeling, which is proper to it. Nothing is more foolish than to wish to make children substitute ours for theirs, and I would as soon require a child to be five feet high, as to display judgment at ten years of age.'

" But, independent of the danger to the physical constitution, nothing is in reality gained as respects the intellect by such artificial forcing. On the contrary, the energies of the mind being thus prematurely exhausted, it seldom happens that these infant prodigies, which raise such proud hopes in the breasts of parents and friends, display even mental mediocrity in their riper years. In some cases insanity, or even idiocy, has been the melancholy result of such unnatural exertion of the organ of thought while yet delicate and unconfirmed.

" Furthermore, those even whose minds naturally, or independent of education, exhibit an unusual precociousness, rarely fulfil the expectations they awaken. Either falling the victims of untimely decay,—

' So wise so young, do ne'er live long,'

or else reaching early the limit of their powers, they stop short in their bright career, and thus, in adult age, take a rank very inferior to those whose faculties were more tardy in unfolding, and whose early years were consequently less flattering. That mind will be likely to attain the greatest perfection, whose powers are disclosed gradually and in due correspondence with the advancement of the other functions of the constitution. It is a familiar fact that trees are exhausted by artificially forcing their fruit ; and also, that those vegetables which are slow in yielding their fruit, are generally stronger and more lasting than such as arrive earlier at maturity.

" ' We have frequently seen in early age,' observes a French writer on health, ' prodigies of memory, and even of erudition, who were, at the age of fifteen or twenty, imbecile, and who have continued so through life. We have seen other children, whose early studies have so enfeebled them, that their miserable career has terminated with the most distressing diseases, at a period at which they should only have commenced their studies.'—*Tourtelle*."

One serious evil of overtasking the mind towards puberty is especially observed in females, in whom, from this cause, the function of the uterus proper to that age is imperfectly developed. Our author does not touch on this subject, though in our opinion it, is one to which the attention of parents cannot be too strongly drawn.

The following passages contain some useful observations :—" The capabilities of the mind, like those of the body, must necessarily have their limits, and are hence liable to be overtasked. The powers of the brain may be impaired by extravagant mental, in like manner as those of the muscles by severe corporeal exertions. And then so close are the sympathetic relations between mind and body, that whatever serves to injure the former, must

at the same time put in hazard the welfare of the latter. Hence, if the intellectual faculties are habitually overstrained, a train of moral and physical infirmities may be induced which shall imbitter existence and abridge its duration.

"Persons who addict themselves immoderately to intellectual pursuits become exposed to affections of the brain, or organ especially abused. They are liable to headachs, and an indescribable host of nervous ailments. Inflammation, too, and other organic diseases of the brain will sometimes supervene. And, as they advance in life, apoplexies and palsies are apt to assail them. Whenever there exists a predisposition in the physical constitution to apoplexy, close mental application is always attended with the utmost hazard, and more particularly so after the middle term of life.

"Epilepsy is another melancholy disease of the nervous system, which a highly active and exalted state of the mind would seem to favour. Many individuals, distinguished for their talents and mental efforts, have been the subjects of this unhappy malady ; as, for example, Julius Cæsar, Mahomet, and Napoleon. And among learned men, Petrarch, Columna, Francis Rhedi, and Rousseau, are familiarly cited instances. Still, in these cases how much may be justly ascribed to the abstract labour of intellect, and how much to mental anxiety, or the undue excitement and depression of the moral feelings, cannot be certainly determined.

"Extreme mental dejection, hypochondriasis, and even insanity, particularly if there be in the constitution any tendency to such conditions, may sometimes result from the cause I am considering. And in occasional instances, under their intemperate exertion, the energies of the brain have been consumed, the light of intellect has become extinct, and in a state of mental imbecility, or even drivelling idiocy, the wretched victim has been doomed to linger out a pitiable existence within the walls of a madhouse.

" I have thus stated what may occur in extreme cases from abuse of the intellectual powers. Still I conceive that the diseases of literary men are far oftener to be imputed to incidental circumstances, as their sedentary habits, injudicious diet, &c., than to their mere mental labours ; and that would students, or those whose avocations draw especially on the energies of the mind, but bestow the requisite attention on their regimen of life, they might, as I have before said, enjoy as good and uniform a share of health as most other classes of the community.

"Among the rules of health most essential to be observed by those whose pursuits belong more especially to the mind, we may in the first place mention temperance both in eating and drinking. Persons of studious and sedentary habits neither require, nor will they bear, the same amount and kind of food as those whose occupations call forth greater physical exertion, and produce, consequently, a more rapid consumption of the materials of the body. If such, therefore, will persist in eating and drinking like the day-labourer, they must look to experience indigestion, and all its aggravated train of miseries. Or, even should they escape dyspepsia, the yet graver ills of excessive repletion, as inflammations and congestions, will be likely to overtake them.

" It is important, too, that a certain degree of regularity be observed in respect to their meals, the stomach, like every other organ of the animal economy, being subject to the influence of habit ; and that during them the mind be withdrawn as much as possible from all other concerns, and interested especially in the agreeable sensual impressions it is experiencing. The enjoyment of our food forms one of the best of sauces for the promotion of its digestion.

" Eating, furthermore, being an imperious animal duty, sufficient time should always be appropriated to its performance. The habit of rapid eating is exceedingly common among studious men, and is very apt to be acquired at our colleges and boarding-schools, the inmates of which often despatch their food more like ravenous animals than civilized human creatures. This most disgustingly vulgar practice of gorging our food but half masticated,—of hurrying through our meals as though we were just going off in the stage-coach,—I believe to have more concern in the production of indigestion among us than has generally been suspected. We are told that Diogenes, meeting a boy eating thus greedily, gave his tutor a box on the ear ; and also that there were men at Rome who taught people to chew as well as to walk. Whether some such teachers might not be advantageously employed among ourselves, I submit to the judgment of my readers.

" There are a class of men who, under an affectation of moral and intellectual refinement, assume to regard eating as one of those base animal gratifications to which as little time and thought as possible should be appropriated. But let us remember that we yet dwell in the flesh, and cannot, therefore, become wholly spiritualized. Those actions which nature has enjoined as necessary to our constitution, are fortunately—and, indeed, the species, with its present laws, could not otherwise have been preserved—associated with enjoyment. It is the part of wisdom, therefore, not to despise, neither slavishly to pursue, the corporeal pleasures, but to accept of them with thankfulness, and to partake of them with prudence. The gratification of all our appetites contributes, both directly and indirectly, to health and happiness ; it is their abuse only that is reprehensible, and followed by pain and regret. How many delightful associations, how many springs of domestic enjoyment, flow from the regularly returning social meal—an occasion which brings into so near and happy intercourse families and friends, and serves to draw more closely among them the bonds of human affection. He alone who has been deprived of such pleasure can rightly estimate its value. A purely intellectual being would be monstrous to humanity. There belong to our nature, sensual, moral, and intellectual wants, and it is to their wise and duly apportioned gratification that we owe whatever happiness existence can afford.

" It is scarcely necessary, I trust, to insist on the importance to the health of intellectual men, of daily exercise in the open air. Without this, no one whose employments are of a sedentary nature can expect to maintain sound health. The amount of exercise required will depend something on the constitution, and much on the character and quantity of the food. From two to four hours of the day should certainly be devoted to active bodily exertions.

" Many students, tempted on by the inviting quietude, are in the habit of protracting their labours late into the hours of the night, and at the manifest expense of their physical health. The wan and sallow countenance of the student is almost proverbially associated with the midnight lamp.

" Few causes tend more certainly to shatter the nervous energies, waste the constitution, and hasten on the infirmities of age, than deficient and irregular sleep. Thus, ' to be a long and sound sleeper,' we often find included by the older writers among the signs of longevity. Those persons whose occupations—whatever may be their nature—interfere with their necessary and regular repose, are almost always observed to be pale, nervous, and emaciated. Even a single night of watching will often drive the colour from the cheek, the expression from the eye, and the vigour

from the brain. Although so much of evil to mind, body, and estate is referred to the prodigal indulgence in sleep, yet observation of our own busy and ambitious community has led me to doubt whether, on the whole, more injury is not to be ascribed to its deficiency than excess. Nor do I hesitate to believe that less evil would result, certainly to health, from adding to than curtailing the needful term of repose.

" Constitutions will necessarily vary in the amount of sleep they require, but, in the majority of persons, as much as seven hours of the twenty-four should be appropriated to it. The slumbers of the fore-part of the night affording, as there is good reason to believe, most refreshment to the functions, it is advisable that students retire and rise seasonably, and accomplish, if circumstances will permit, their most arduous duties in the early portion of the day ; for this is the time, if the body is in health, when the thoughts will be generally most clear, and the labours consequently most profitable. The fittest working hours, in fact, both for mind and body, would seem to be those which intervene between breakfast and dinner, having reference, of course, to our own customary hours for these meals. It is the stillness and seclusion of the night which have mostly rendered it so favourite a period for study and contemplation.

" Again, men of intellectual application should frequently relax their minds by amusing recreation—mingling in cheerful society, and joining in its gay diversions ; otherwise they are apt to become gloomy, irritable, and misanthropic,—states of feeling which are always at enmity with our physical well-being. Let them unite, therefore, in the laugh, the game, the dance, or any of the innocent frivolities of society ; the dignity of the most erudite and talented need not suffer in consequence, while the health, from the moral exhilaration thus procured, will be sensibly benefited. It is certainly worthy of inquiry, if the learned and distinguished of the present day, or at least among ourselves, do not cherish an undue contempt for the light and healthful amusements of society, and thereupon unreasonably exclude themselves from their participation. Among the ancients the greatest souls did not disdain occasionally to unbend, and yield to the laws of their human condition. The Catos, with all their severity of manners, found relaxation and enjoyment in the ordinary pleasures of life. Epaminondas, amid all his glory and moral greatness, felt it no detraction to dance, and sing, and play with the boys of his city. Scipio Africanus could also amuse himself in gathering shells, and playing at quoits on the sea-shore with his friend Lælius. And the sage Socrates became the pupil of the captivating Aspasia in dancing, as well as in eloquence, even when he was advanced in life. Montaigne, after extolling the mighty intellect and lofty virtues of Socrates, his patience and forbearance under poverty, hunger, the untractableness of his children, and the scratches of his wife, concludes by saying that ' he never refused to play at cobnut nor to ride the hobby-horse with the boys.'—*Essays.*

" As a pure air not only serves to invigorate and sustain the body, but likewise to animate the mind, literary men should always choose for their studies, where so much of their time is passed, a large and airy room. The narrow and confined apartments which many select for the prosecution of their mental labours can scarcely be otherwise than unwholesome.

". Different individuals, as we should naturally conclude, vary materially in their capability of supporting mental exertions. This may in some cases be referable to habit, and in others to the native strength or feebleness of the constitution in general, or of the organ of thought in particular. To

some persons mental application is always irksome ; the task of thinking is the most unwelcome one that can be imposed on them. While in others, just the reverse is observed ; the intellectual operations are ever accomplished with ease and satisfaction, and to the new results of their studies and reflections do they owe the purest delights of existence. In the latter, then, the exercise of mind, being less arduous, and associated also with a pleasurable excitement, will be far better sustained than in the former.

"I may here remark, what indeed must be obvious to all, that we can form no correct estimate of the absolute amount of mental labour in different individuals from what they accomplish. For, as the giant in body may support his three hundredweight with as little effort as the dwarf his one, so also may the gigantic intellect produce its astonishing results with the same ease that the less gifted mind performs its comparatively insignificant tasks. Many a poetaster has doubtless worked as hard to bring forth a volume of doggerel verses, as Newton did in the production of his Principia.

"In relation to the period of time that may be safely and profitably devoted to study, we can lay down no rules which will be universal in their application. Few persons, however, can spend advantageously, and without hazard to the physical health, more than seven, or, at the furthest, eight hours of the twenty-four, in close mental application. As the brain grows weary its capabilities must diminish, and its productions, in consequence, be comparatively feeble ; whence they are said to smell of the lamp. Having then regard only to the intellectual results, nothing is really gained by overtasking the mind. It has been truly remarked, that 'there is scarcely any book which does not savour of painful composition in some part of it ; because the author has written when he should have rested.' "

On the subject of the influence of the passions over the bodily health, we quote the following passages :—

"The agency of the passions in the production of disease, especially in the advanced stages of civilisation, when men's relations are intimate, and their interests clash, and their nervous susceptibilities are exalted, can scarce be adequately appreciated. It is doubtless to this more intense and multiplied action of the passions, in union, at times, with the abuse of the intellectual powers, that we are mainly to attribute the greater frequency of diseases of the heart and brain in the cultivated than in the ruder states of society. Few probably even suspect the amount of bodily infirmity and disease among mankind resulting from moral causes ;—how often the frame wastes, and premature decay comes on, under the corroding influence of some painful passion.

" It has seemed to me that our own profession, in seeking for the remote occasions of disease, are too apt to neglect those existing in the mind. Thus does it oftentimes happen that, while the physician is imputing the infirmities of his patient to all their most familiar causes, as bad diet, impure air, want of exercise, &c., it is in reality some unhappy and unrevealed passion which is preying on the springs of life. A knowledge of the secret troubles of our patients would, in many instances, shed new light on their treatment, or save them at any rate from becoming the subjects, if not the victims, of active medicinal agents.

" In delicate and sensitive constitutions, the operation of the painful passions is ever attended with the utmost danger ; and should there exist a predisposition to any particular form of disease, as consumption or insanity

for example, it will generally be called into action under their strong and continued influence.

"The passions, however, although so greatly abused, and the occasion of so large a proportion of the ills from which we are doomed to suffer, yet, when properly trained, and brought under due subjection to the reasoning powers, are the source of all that is great and good in man's nature, and contribute in a thousand ways, both directly and indirectly, to health and happiness. Intellect, without their quickening influence, even could it exist at all, would be but a dull and dreary waste. They are the sunbeams which light and cheer our moral atmosphere. The greatest achievements are always accomplished by those of strong passions, but with a corresponding development of the superior faculties to regulate and control them. Sluggish feelings can never be parents to high and generous resolves. It belongs to us, then, to govern, and direct to their proper ends, through the force of reason, the passions which nature has implanted in our breasts. They cannot, nor is it desirable that they should, be extirpated.

> ' When Reason, like the skilful charioteer,
> Can break the fiery passions to the bit,
> And, spite of their licentious sallies, keep
> The radiant track of glory ; passions then
> Are aids and ornaments. Triumphant Reason,
> Firm in her seat and swift in her career,
> Enjoys their violence ; and, smiling, thanks
> Their formidable flame for high renown.'
>
> *Young.*

"Mankind, owing to original differences of constitution or temperament, vary remarkably in the ardency of their feelings. The external physical characters will, in fact, often indicate pretty clearly the native force of the passions. Who, for example, would not at once distinguish, even by the complexion, the sanguine or warm and excitable, from the phlegmatic or cold and passionless ?

"Incidental circumstances acting on the constitution will likewise influence the strength of the passions. Thus, the inhabitants of tropical countries are more apt to be hasty and violent in their feelings, and consequently to become enslaved to their sensual and animal nature, than those who dwell in colder climes. Indolence and free living will also aggravate, and activity and temperance weaken, the operation of the passions ; hence there are few better antidotes to their ungovernable violence than simple food and drink, and bodily labour.

"In some persons the animal or baser nature would appear constitutionally to predominate, the passions readily breaking from the control of reason and the will, and bringing too often sorrow, shame, and disease upon the unhappy individual. In others the reverse of this is true ; the intellectual nature holding the supremacy, ever keeping the feelings under a just restraint : and fortunate indeed are they

> ' Whose blood and judgment are so well commingled.'

"Some, again, seem naturally characterized by the good, and others by the evil passions. We meet individuals, not often it is true, yet we do meet such, in whom the amiable affections maintain a distinguished pre-eminence even from the earliest development of their moral nature. They appear predestined to be good. Their placid and benevolent tempers would seem to be the result of a physical necessity, or of some happy but partial

action of creative power. Such, however, are exceptions to the general laws of the species, and are consequently never perpetuated. But here the question will necessarily arise, Can we ascribe any virtue, any merit, to such innate goodness, to such constitutional amiableness? Virtue is essentially active. It is engendered out of the contentions between the generous and noble, and the base and despicable passions of the soul. Its very existence depends on the successful struggle with our evil dispositions. Chastity would be no virtue in one without carnal desires, nor clemency in him who was incapable of hatred or anger. The poets glorify their gods by making them war with demons. As the artist heightens and sets off the bright and beautiful colours of his canvass by the dark shades with which he intermingles and contrasts them, and exaggerates the beauty of his angels through the ugliness of his devils, so does nature, on her moral canvass, enhance the lustre and comeliness of virtue by the very shadows and deformities which she throws into the picture. Hence, on the commonly received notions of the character of God,—as I have somewhere met the idea,—although we may call him good, great, just, bountiful, yet we cannot call him virtuous; for his goodness demands no effort,—no sacrifice; it belongs to his very essence; is as natural to him as it is to the flower to shed its odours, or the sun its luminous rays.

"As the good passions greatly preponderate in some natures, so do the bad in others; and we meet those who scarce ever, even from their childhood, manifest an amiable or generous feeling. Such extreme cases, however, are fortunately but rare. Generally there exists in our composition a due mixture of the good and evil dispositions:—'our virtues would be proud if our faults whipped them not; and our crimes would despair if they were not cherished by our virtues.'

"Finally, there are those who, from early existence, are distinguished by the predominance of some particular passion, as fear, anger, or ambition; that is, they are constitutionally timorous, irascible, or aspiring in their tempers. Education, however, may do much, very much, in repressing passions originally in excess, and developing such as are deficient; and herein consists moral culture, so vitally essential both to our health and happiness. Need I say, then, how much we must be the creatures of constitution and circumstance? how much of what we are we must owe to our native organization and predispositions, and those resistless influences which, in the necessary current of events, are brought to act upon us?

"I am aware that such views as the preceding will be objected to by some as inconsistent with the freedom of our will, or as tending to the doctrine of necessity, of which many appear to entertain such needless apprehensions. That we belong to some vast system, the grand purpose of which is hidden from human intelligence, will scarce be gainsaid; and that our every volition and action may be but infinitesimal and necessary links in the mighty and complicated chain of this great and unsearchable system, it is not irrational to believe. But as I pledged myself in the outset to shun all abstract speculations, I will leave this perplexed subject of fatalism with the remark only, that there was true philosophy in that ancient mariner who, being caught in a great storm at sea, exclaimed thus to Neptune: —'O god, if it is thy will I shall be saved!—and if it is thy will I shall be destroyed!—but I'll still steer my rudder true.'"

We take the following passages as specimens of our author's mode of treating of the particular passions.

"Having learnt in the preceding chapter how severe and dangerous are

the effects of acute anger on the vital economy, it will excite no surprise that under its more chronic action, as in habitual irritability or fretfulness of temper, enmity, hatred, revenge, or other malevolent feelings, as envy or jealousy, in which anger, to a greater or less degree, is almost necessarily blended, the bodily health should sooner or later experience a baleful influence. The constant torture of mind kept up by such unhappy feelings cannot but be attended with the most deleterious consequences to the physical economy. In the stomach and liver their effects are early and particularly evinced. Thus will the appetite and digestion become impaired, and the hepatic secretion be variously disordered, and sometimes partially or even wholly obstructed, when the bile, being absorbed into the system, taints the complexion with that dark and bilious hue which is so characteristic of an unamiable or malignant temper. Hence the common expression, to turn black with anger, hatred, or revenge, may have originated in correct observation. It is a literal truth, although expressed in poetry, that one may

> ——————' creep into the jaundice,
> By being peevish.'

" Irritability and moroseness of temper may also cause various inflammatory and nervous complaints, and such, more especially, to which there is any tendency in the constitution. Thus gout, rheumatism, hysterics, nervous headachs, and other nervous pains, as tic douloureux, are very apt to be excited, or their fits to be renewed, under such prejudicial influence.

" Nothing, certainly, can be more desirable, both in respect to our moral and physical health, than a quiet resignation to the fate decreed us. Fretting and repining under unavoidable evils only adds to their burden, and to the eye of true philosophy shows a temper about as inconsistent as that exhibited by the heathen world in flagellating their gods for the calamities befalling them.

" The condition of temper now occupying our consideration is in a particular manner injurious when the system is labouring under disease. It is well known to every observing physician, that fractious patients, other circumstances being the same, recover less promptly, and are more exposed to relapses, than those who display greater calmness and resignation in their sufferings. And equally familiar is it to the surgeon, that under a bad state of temper, wounds heal less kindly, and when recently healed will even at times break out afresh. Likewise, that external inflammations pass less safely and regularly through their restorative processes, and that the pus of abscesses may be speedily transformed from a healthy to a morbid condition under such unfriendly moral agency.

" How important, therefore, it is, even if we consider but our physical welfare, to cultivate, as far as in us lies, an amiableness of temper, and to bear the little ills and crosses of life with all possible composure, must now be most apparent. It is, after all, the minor evils, the trifling annoyances, or such as tend merely to ruffle or fret our feelings, that are apt to be the least resolutely supported, and that oftentimes do more to mar our happiness, and impair our health, than even the absolute and severe afflictions of life. Many of us who would be impatient under the pricking of a pin, might submit with scarce a tremor or complaint to the most important and painful operation.

" The immediate and distressing physical effects of this mental irritation may be especially noted in those of a nervous or sensitive temperament, when disturbed on retiring to rest by unseasonable noises, as the barking of

dogs, crying of children, thrumming of pianos, &c. Under such vexing circumstances, the action of the heart often becomes unnaturally accelerated, and every pulsation of it most painfully sensible. A disagreeable dryness, too, is commonly experienced in the mouth and throat, with feverishness, sometimes itching of the skin, and a general nervous agitation, or restlessness, far more intolerable than any definite pain of body; and the health, as might be expected, remains disturbed through the whole of the subsequent day. Under the condition described, the nervous sensibility will sometimes become so morbidly exalted, that the slightest sounds, as even the ticking of a clock, will be almost insupportable."

We take our leave of this work, in which we have felt a very considerable interest, with the following passage from the concluding chapter :—" I have stated, as my readers will remember, in the first part of this volume, that the exercise of the intellectual functions, abstractedly considered, does not tend on a general principle to favour disease or shorten life. Yet sometimes simple intellectual labours may be prosecuted to such excess as to occasion manifest injury both to the moral and physical constitution. On examining the reports of different lunatic asylums, we shall find, in almost all of them, some of the cases attributed to excess of study. I am satisfied, however, that a larger share, both of mental and bodily ills, than is in accordance with rigorous truth, is referred to immoderate exertion of the intellect, the reasons of which error have been previously explained. Thus, our intellectual efforts are at the present day almost always associated with those habits of life, as undue confinement, insufficient and irregular sleep, and other like incidental circumstances, which are well known to be inimical to health. And furthermore, as knowledge is seldom pursued for its own sake, but for some ulterior advantage, either of fame or pecuniary profit, mental labours are rarely unaccompanied with the workings, too often the strong and painful workings, of passion. Intellectual men, it must be acknowledged, are, either by nature or the force of circumstances, particularly prone to ambition, and are consequently exposed to all those evils and sufferings heretofore described, which attend upon this passion when it becomes a ruling principle in the human breast. If moderate and obedient to reason, and its aims guided by wisdom, it may, as I have previously said, serve as an incentive to call into useful and wholesome exertion the different powers of our nature ; but when inordinate, as it is unhappily but too apt to become, then will feelings of the most painful and destructive character inevitably grow out of it.

" Our own literary and scientific men, those of the learned professions for example, will afford ample illustration of the truth of the above remarks. How restless, often, and anxious are their struggles in pursuit of a little ephemeral notoriety ! To what various expedients do we not see them resorting for the sake even of that brief and equivocal fame derived through the columns of the periodical press ! But then, as the flattery of success may not always reward their endeavours ; as they may merit the shafts of censure where they looked for the blandishments of praise ; too frequently must the painful and noxious passions, born of defeated hope and wounded pride, as anger, hate, jealousy, grief, humiliation, take possession of the soul, marring all life's moral peace, and calling forth a host of physical ills, as indigestions, nervous disorders, palpitations, and all sorts of irregularities of the heart's action, burdening existence and abbreviating its term.

PART III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

Physiological Researches upon Alimentary Substances. By MM. C. BERNARD and BARRESROILL.

THESE gentlemen pointed out in a work they lately published a simple and very easy process, by means of which alimentary substances might be distinguished from non-alimentary substances. This process consists in dissolving the substance to be examined in gastric juice, and then injecting the solution so prepared into the jugular vein of an animal. By this process an artificial chyme is formed of known strength and composition, which, being introduced directly into the blood, may be followed through its several subsequent transformations.

If the substance acted upon in this way be assimilable, *i. e.*, if it is alimentary, it soon entirely disappears from the blood, and no trace of it can be discovered in any of the secretions.

This, for example, is the case with sugar and albumen, substances which are completely assimilable when they have been injected into the veins after being dissolved in gastric juice. If, however, these materials be dissolved merely in pure water and injected into the venous system, they will be found unchanged in the blood and urine.

If, on the contrary, we use in a similar way materials which are not assimilable, these substances do not disappear from the blood, and even where they are dissolved, in any proportion, in gastric juice, or any other vehicle, they are always found unchanged in the blood and the excretions. Such, for example, is the case with the prussiate of potass, which is always to be found unchanged in the urine. These results now mentioned, and which have been produced upon substances artificially digested, are exactly similar to those produced upon substances naturally digested and introduced into the venous system by means of the lacteal vessels. For in this case as in the former, the authors have never been able to find sugar or albumen, which they had introduced into the stomachs of dogs, in the urine ; whilst prussiate of potass, so introduced, was invariably found, and that in full quantity.

The conclusion drawn by the authors from these and other observations of a similar kind is, that all alimentary substances which have been dissolved in gastric juice, whether artificially or not, disappear in the blood, and are not to be found in any of the secretions ; the opposite being the case with all non-alimentary substances.

In illustration of what has now been stated, we give the following comparative experiments made by the authors upon dogs with sugar, albumen, and gelatine.

The jugular veins of three young healthy dogs were opened : into the first an aqueous solution of cane sugar was injected ; into the second an aqueous solution of albumen ; and into the third an aqueous solution of gelatine. No accident took place during the performance of these operations. Three hours afterwards the urine of each dog was examined separately. Sugar was found unchanged in the urine of the first dog ; in the urine of

the second dog albumen was found; and in the urine of the third dog the presence of gelatine was proved in a most satisfactory manner. Thus sugar, albumen, and gelatine, injected without being dissolved in gastric juice, were found in three natural states in the urine.

The same substances, and in equal quantities, were dissolved separately in fresh gastric juice extracted from the stomach of a dog. The substances were then injected into the veins of other three young healthy dogs in the same way as in the former instance. The urine was likewise examined three hours after these operations, when no sugar was found in the urine of the first animal, nor albumen in the urine of the second animal, but in the urine of the third, gelatine was found as distinctly as it was in the urine of the third animal of the former series of experiments.

To give more certainty to the last-mentioned experiments, the authors made similar trials upon themselves. They took alternately a little sugar, albumen, and gelatine. They were unable in any instance to detect the presence of sugar or albumen in their urine, whilst they invariably found gelatine in it upon examination. From these experiments they conclude, that gelatine is a non-alimentary substance.—*Journal de Pharmacie et de Chimie*, Juin 1844.

SURGERY.

On the Removal of Encysted Tumours from the Eyelids.

THE following extract from one of Mr Liston's Lectures, as reported in the *Lancet* for June 29, we are induced to transfer to the pages of our Journal, on account of the very valuable hints which it gives for the removal of those troublesome tumours or cysts which are found so frequently forming in the eyelids, and which are often a source of much annoyance both to the patient and to the practitioner. The plan which Mr Liston recommends of puncturing them from the inside, squeezing out their contents, and then breaking up the cyst with a probe, is the one which we most generally adopt ourselves, and we have very seldom found it to fail. It is not often that we find the tumour returning again, when the cyst is well broken up; but when it does, it is only necessary to open it again, and introduce either a fine point of the nitrate of silver, or a small portion of caustic potass, as Mr L. advises, and in a short time all traces of the disease have disappeared. This mode of treatment is, however, only adapted for the removal of tumours which are attached to the inner surface of the tarsal cartilage; when they are situated on its outer surface, it is then necessary to remove them by an opening through the skin, and if possible dissect them neatly out. This operation requires some little care and dexterity, for as the eyelid is very thin, we run a risk of cutting through it altogether, and injuring the globe, or we may make an opening like a button-hole in the tarsal cartilage, which will not heal up, and which will cause much disfigurement to the patient.

" In the first place, then, you will have now and then forming, in the upper lid especially, small tumours. I do not mean to tell you about a sty—a trifling, though painful enough, little abscess of the edge of the eyelid, but a chronic swelling. There is a projection of part of the upper lid and a trifling discoloration; sometimes there is more than one, and these, in young females more particularly, must be looked to in consequence of their causing a great deal of deformity. In examining a case of that kind, you evert the lid, take hold of the eyelash, and, as common

people would say, turn the eye inside out. You thus expose the inner or conjunctival surface of the upper lid. These tumours now and then, though rarely, occur in the lower lid, but more frequently in the upper, and sometimes they seem to form in the very substance of the cartilage of the tarsus. The tumour consists of a thin cyst, containing a glairy fluid. Sometimes it becomes inflamed, and there is a little puriform matter in the cavity. It is desirable to get quit of these swellings. You would not make an incision on the outside, for it would create some deformity, although a clean division made of the fibres of the orbicularis palpebrarum muscle, in a right direction, would not probably be noticed after a time. You evert completely, as I have said, the eyelid. But it is better to operate from within, and you thus expose the tumour, the parietes of which are generally exceedingly thin. You have only, then, to open the cyst. You make a crucial incision with the point of a lancet, or a fine bistoury, or a small keen cutting knife of any kind. You must not on any account attempt to dissect out the cyst; for if you do, the probability is you will make an opening like a button-hole right through the lid. There is no means of taking away the cyst; it is so exceedingly delicate and so incorporated with the substance of the lid. You must endeavour, however, to get rid of the disease. There is, by the way, one great difficulty in everting the lid in the living body. You may fail in the first instance, and be under the necessity of using a probe. You lay on the probe behind the cartilage, cant the cartilage over, and turn the lid inside out. But with a little practice and a little dexterity you will be able to turn the lid out without any such contrivance or assistance, by merely taking hold of its edge, and using a slight motion with the point of the forefinger. You will be under the necessity of turning the eyelid over thus, in many cases, in order, for instance, to discover and remove foreign bodies irritating the surface of the eye, and to destroy granulations of the conjunctiva, which act somewhat as foreign bodies do. Having everted the lid, then, with the point of a bistoury you make a very small incision into the cyst, and then perhaps you make a little cross cut. This is very easily done. You stand behind the patient, and support his head upon your breast, and then with a small sharp-pointed probe, slightly bent at the point, you endeavour to tear up the cyst. You allow the bleeding to stop, turn out the glairy contents, lacerate the cyst a little, and let the eyelid resume its customary place. It discharges for a few days, but it then gets well, and usually there is no return of the disease. Now and then, however, the disease will return; and if you have a patient in whom the operation has been ineffectually performed previously, or in whom the disease has reappeared in spite of its due performance, though it very seldom does, you may be under the necessity of taking still more certain and effectual measures. You open the cyst, allow the contents to escape entirely, and stay till the bleeding has ceased; it will do so all the sooner that the lid is permitted to resume its normal position. You may then dip the end of a small probe slightly in nitric acid, and put it with much care into the cyst, or with a probe such as this (presenting it) you may introduce a minute portion of caustic potass into the cyst, and it is strange indeed if it is not then effectively destroyed. The surface of the eyeball must be protected against the potass, but there is no chance of its being injured if you use a portion only about the size of a pin's-head, and keep the eyelid away from it, or you may rub the surface of the conjunctival membrane over with olive-oil, or you may apply a small bit of lint over the opening, previously soaked

2 U

with dilute vinegar, or you may leave a thin bit of lint, spread with some bland ointment, between the lid and the ball of the eye for a short time. This, however, is scarcely necessary. By this means you effectually and safely remove these encysted tumours; they are very troublesome, and it is well that you should know how to treat them properly."

On Amputation of the Ankle Joint.

In the last number of the London and Edinburgh Monthly Journal of Medical Science Mr Syme gives several cases of amputation of the ankle joint as recently introduced by him. This amputation at the ankle joint is not a new one, having been performed at different times by several surgeons on the Continent; but in all probability the result in these cases had not been very satisfactory, as the operation had never been adopted by others, and we can scarcely wonder at this when we consider the mode in which it was performed. Under these circumstances, we are of opinion that fully as much merit attaches to the re-introduction and the establishing upon a proper basis an operation which had fallen into disrepute, as to its original proposal. We regard the introduction of this amputation as a very great addition to surgery, inasmuch as it supplants a dangerous operation by one attended with comparatively little risk; and at the same time yielding in every point of view a much better result. We agree completely with Mr Syme when he says, " It may seem a startling but it is nevertheless a true statement, that amputation at the ankle joint, with hardly any exceptions, may and ought to supersede amputation of the leg below the knee.

" The advantages of amputation at the ankle joint (says Mr S.), as compared with amputation of the leg, are not limited to the smaller degree of mutilation and greater utility of the limb; since the operation is also attended with much less danger. This will appear when it is considered,— 1st, How much less the shock must be, from the small extent of parts removed, which is little more than in Chopart's partial section of the foot. 2d, That the smallness of the arteries divided prevents any risk of serious hemorrhage. 3d, That the cancellated texture of the bone is not liable to exfoliate. 4th, That from the medullary canal remaining entire, inflammation of its contents, and also of the veins, is prevented."

This statement is, we think, fully borne out by experience. Mr S. refers to fourteen cases where the operation has been performed; eight in his own practice, and six in that of others, without a fatal result. We have ourselves seen most of the cases in which the operation has been performed by Mr Syme as well as by his colleagues in the Infirmary of Edinburgh, and we were much gratified by the progress of the cases, by the comparatively little constitutional disturbance which followed the operation, as well as by the excellence of the results, even in those in which, from the state of the soft parts, reasonable doubts as to its success might have been entertained. We may here remark, that however much tumefaction of the soft parts may exist, it need form no bar to the performance of the operation, inasmuch as we find that here, as after excision of the elbow joint, the soft parts rapidly return to a healthy condition when the diseased bone is removed.

In one of the cases operated on in the Royal Infirmary, in which the disease of the soft parts existed to an enormous extent, this was particularly striking; the tumefaction diminishing after the operation with

great rapidity, and union taking place in almost as short a time as if the integuments had been in a perfectly sound state.

The peculiarity of Mr S.'s operation consists in the saving a flap from the sole of the foot and thick integuments of the heel, by making a transverse incision, and dissecting these parts from the os calcis, so that the dense textures provided by nature for supporting the weight of the body might be still employed for the same purpose.

The mode of performing the operation we give in Mr Syme's own words : —" The best instrument for performing the operation is a large bistoury, or small amputating knife with a blade about four inches long. There is no occasion for a tourniquet, as the assistant has complete command of the vessels by grasping the ankle. In my first operations, the flap was made unnecessarily long ; and I feel confident that the following directions may be trusted for exactly determining its proper extent. The incisions across the instep and sole of the foot should be curved, with the convexity forwards, and exactly opposite each other. A line drawn round the foot midway between the head of the fifth metatarsal bone and the malleolus externus will show their extent anteriorly, and they should meet a little way farther back, opposite the malleolar projections of the tibia and fibula. Care should be taken to avoid cutting the posterior tibial artery before it divides into the plantar branches, as in two cases where I did so there was partial sloughing of the flap. If the ankle joint is sound, the malleolar processes should be removed by cutting-pliers ; but if the articulating surfaces of the tibia and fibula be diseased, a thin slice of these bones should be sawn off. The edges of the wound should be stitched together, and lightly dressed."

There is one point upon which Mr S. dwells particularly, and that is the avoiding the cutting of the posterior tibial artery before it divides into the plantar branches, a precaution which, if we may judge from the two cases which he relates, it is very necessary to attend to. In both of these the vessel had been cut before its division, in one accidentally, in the other intentionally, from the facility which he had experienced in tying the vessel in the first. In these cases sloughing of the flap to a very considerable extent followed, in both through fully half its extent. In the first case Mr S. attributed this to the undue pressure of a bandage ; but after the second, in which great attention had been paid to the dressing, he was led to refer it to what we believe to be its real cause. " As on both occasions," he says, " the artery had been cut before its division, while in all the other cases it had been left entire, and as the flap at best, being deprived of nourishment from most of its ordinary sources, could be chiefly supplied with blood only through the successive anastomoses of small vessels, I concluded that this deviation from usual practice had led to the mischief in question, and resolved to avoid it for the future." We would repeat in conclusion, that the profession and public are much indebted to Mr Syme for introducing this operation, which we believe is destined in a great measure to supplant the amputation of the leg below the knee. We may add, that the boot required after the amputation is very simple, and cannot, we should think, much exceed in price an ordinary laced one.

Since writing the above, we find that a somewhat similar idea as to the mode in which amputation at the ankle joint ought to be performed has occurred to M. Malgaine, as described in his *Médecine Opératoire*, p. 352. We give the passage in his own words :—" Le moignon devant reposer sur un pied artificiel, il importe que la cicatrice ne soit pas au centre. Nous

ferions donc un très court lambeau en avant, par une incision demi-circulaire aboutissant au bord postérieur de chaque malléole. Puis l'articulation serait attaquée par le côté interne dont la malléole descend moins de quatre lignes que l'autre, et la désarticulation achevée, on taillerait le lambeau aux dépens de la peau du talon, plus propre que tout autre, après la guérison, à soutenir le poids du corps. Et si les malléoles faisaient trop obstacle à la réunion, nous ne verrions aucun inconvénient à les retrancher et à obtenir ainsi le moignon le mieux conformé et le mieux revêtu, de tous ceux qui résultent d'amputations faites à la jambe et à la cuisse." M. Malgaine, however, never so far as we can learn performed the operation, although his opportunities for doing so must have been pretty frequent, having probably the same doubts of its success which other surgeons entertained.

MATERIA MEDICA AND DIETETICS.

Walnut Leaves in several Varieties of Scrofulous Disease.

Dr Negrier, Professor in the Medical School of Angers, published some time ago (Gaz. Méd. de Paris, 1841, p. 505) a series of cases of scrofula successfully treated with preparations of walnut leaves. In one of the numbers of the same journal for June of this year (No. xxiii. p. 353), he has given a second series of affections of the same kind, in which he has found the same remedy as successful as in his former trials. The cases reported in both series are reducible to,—1st, Unulcerated scrofulous swellings; 2d, Scrofulous ophthalmias; 3d, Scrofulous swellings in a state of ulceration; 4th, Scrofulous swelling and caries of bones. During the three years that have elapsed since his first memoir was published, he has continued to employ the same treatment in such cases, and has obtained, as he says, satisfactory evidence of its permanence.

We cannot say we should have much faith in such a remedy without very numerous trials, yet it must be confessed that all parts of the walnut-tree have powerful sensible qualities; and the fruit, the oil of the fruit, the membrane which invests the kernel, the inner bark of the tree, and even the leaves, have been before known in medicine. Besides the tonic, anti-spasmodic, and vermifuge virtues ascribed to some of the other parts, an infusion of the leaves has been popular in jaundice and in the cutaneous eruptions of children; the leaves, moreover, are said to cure itch on being rubbed on the affected part, and when made in to a pomatum with lard, to favour the growth of the hair.

Treatment of Gout and Rheumatism.

In the Journal de Pharmacie for July 1844, we find the two following methods of treating gout, the one English, the other French, placed in one rticle :—

In gout and rheumatism, Dr Wells, it appears, recommends the affected part to be rubbed with dry flannel for twenty minutes, and afterwards to be covered for three hours with some compresses, kept moist with " Eau de Cologne." This topical treatment, kept up for two or three days, cures both gout and rheumatism.

The French plan is that of Dr Henrotay of Anvers, and consists in the use of colchicum for one or two days, followed by pills of golden sulphuret

of antimony, with a small proportion of opium ; one to be taken night and morning for fifteen days.

The mixture, reduced as nearly as possible to the form used in this country, is as follows :—

R̲ Pulv. gummi acac. Arab.,   .   .   . ℥ii.
    Aquæ puræ, ... ℥viii.
    Alcoholis colchici, ... ℨii.
    Syrup rhei, ... ℥ii.

M. et s. a. fiat mistura cujus sumat cochleare magnum omni altera hora.

The pills, which are to be begun the next day, are the following :—

R̲ Sulphur. antimon. aurat.,   .   .   . ℨi.
    Opii puri, ... gr. iv.
    Pulv. rad. glycyrrhizæ,   .   .   . ℨi.
    Mucilag. acac. Arab.,   .   .   . q. s.

Confice in mass. divid. in pill. xxx. æquales.

All spirituous and fermented liquors are to be avoided, and nothing but the lightest food taken.

Notice on the Variations in the Weight of Prisoners subjected to the Regimen of a Penitentiary. By Dr Marc D'Epine of Geneva. From the " Annales d'Hygiène Publique, Juillet 1844, 63 no."

The paper whose title is quoted above is too long to translate. We propose to extract some of the facts contained in it, and to interpose one or two observations on the subject. Dr Marc D'Epine, as physician to the prisons and member of the Council of Health in the Canton of Geneva, has had favourable opportunities for the task which he has undertaken. His object in registering the weight of the prisoners was to ascertain the effects produced on the process of nutrition by confinement. The greatest precautions appear to have been taken to avoid all possible sources of fallacy. The facts reported are deduced from a register kept for four years, namely, from 1838 to 1842.

The penitentiary of Geneva, from which alone the report is drawn, contains no prisoners sentenced to less than a year's confinement. The inmates are all males, and amount on an average to sixty. They are for the most part young adults ; but a small proportion exceed forty years of age, the great majority being between twenty and forty, or rather between twenty and thirty. There are a few, though the proportion is much smaller, between twelve and twenty. The discipline is that of Auburn, with some exceptions ; labour in public with strict silence during the day, and at night solitary confinement in cells. The prisoners are, however, arranged in four divisions : 1*st*, Those treated with the greatest severity are those condemned to a long term of imprisonment, and those who have been convicted more than once ; 2*d*, Those whose offences are less in degree ; 3*d*, Those whose punishment is purely correctional ; 4*th*, A few whose punishment is correctional, the very young, and those who have behaved well. Even the worst of the criminals confined may by good conduct pass from the first division to the last, in which the treatment is mildest.

The differences in the degree of severity lie in the liberty to obtain additional comforts with the money gained by their labour, in the degree of liberty at the time of airing, in the meals being taken in common and not in solitary cells, lastly, in the use of a flower-garden allowed only to the very young, and to those who have shown signs of amendment.

The aliment of all the prisoners consists of twenty-one ounces of bread daily, soup morning and evening, pulse at noon, potatoes at discretion. " La soupe est au beurre, aux legumes, au riz, ou au gros blé, cinq fois par semaine ; elle est au bouillon de viande mêlé aux mêmes substances alimentaires le lundi et le vendredi, et on donne demi livre de viande à chaque prisonnier le jeudi et le dimanche. La boisson est l'eau pure rendue, pendant les chaleurs seulement, legèrement amère avec de la racine de gentiane. Le vin et le tabac sont interdits." The prisoners work chiefly in sedentary occupations for ten or eleven hours, three hours are consumed in meals and repose, the rest of their time in sleep.

The prisoners were weighed at their reception, and once every six months. Those below twenty-two years of age are excluded in most of the following averages. The average loss of weight was not found to be very great, but strikingly increases with the severity of the treatment, or it is considerable only in the prisoners belonging to the two first divisions.

The comparison between the first and last weighing in 186 prisoners shows a loss of weight in eighty-eight, a gain in eighty-six, and no change in twelve ; but this estimate includes those under twenty-two years of age. When these are excluded, out of 134, seventy-four had lost weight, forty-eight had gained, and twelve remained unchanged. Out of eighty-seven belonging to the two divisions in which there was greater rigour of confinement, fifty-three had lost weight, thirty had gained, and four remained unchanged. Out of forty-seven in the quarters where less rigour was exercised, twenty-one lost weight, eighteen gained, and eight remained unchanged. Or for ten who gained in the severe quarter, fourteen lost ; for ten who gained in the less severe quarter, eleven lost ; and the proportion of those who retained their weight unchanged in the less severe quarters is nearly quadruple as compared with those of unchanged weight where greater rigour was exercised.

Season appears to have made little or no difference on the results, though the weighing took place in the opposite months of January and July.

Our author has contrasted his own results with those drawn from an English prison, namely that of Devizes. The facts referred to are drawn from the Second Report of the Inspectors of the Prisons of England. In this prison, out of fifty-one prisoners, whose weight each was less than 100 lbs., or who as it is to be presumed had not reached adult age, forty-five increased, four lost weight, and two remained unchanged. Out of 449 adults, 274 gained weight, 136 lost weight, and thirty-nine were stationary.

The discipline in the prison of Devizes is described as solitary confinement by night, silence by day, active employment, as the treadmill and working of pumps, few sedentary occupations ; aliment entirely vegetable ; punishments a combination of moral and corporal.

The difference in the results obtained in the English prison is quite remarkable. Instead of eleven losing weight for every ten that gained under the milder discipline, and fourteen losing weight for every ten that gained under the severer, as in the Geneva Penitentiary, we find in the prison of Devizes ten gaining weight for every five that lost ; and this, it is to be remembered, under a diet strictly vegetable, while at Geneva, a pound of solid animal food was allowed weekly to each prisoner, besides meat soup twice a-week.

Two very important circumstances must be taken into account, which show the necessity in all statistical reports of suppressing no part of the particulars. In the English prison, the average period of confinement does not appear to have exceeded three months, while no prisoner was sent to

the penitentiary at Geneva for less than a year. This difference in the period of confinement probably affords an explanation of the difference in the results. Something may also depend on the greater vigour of digestion produced by the more active exertions in the English prison.

We have brought this subject before our readers, believing that such inquiries are of the greatest possible importance. We admit that much difficulty attends them, and that much error arises from imperfect accounts being received as just data ; but that source of fallacy can only be corrected by the multiplication of observers, so that the truth may at last preponderate over the errors which in our first attempts at statistics are unavoidable in every department. It is surprising how little has hitherto been done on this plan in the department of dietetics. We only begin to know the approximation to the range within which the amount of aliment necessary for health lies, from which the important fact appears, that in given circumstances the difference between too much food and too little lies between very narrow limits.

Letter from an Octogenarian Surgeon to Mr Wakley, M.P., showing that he has lived in health for forty years on a strictly vegetable diet, and brought up a healthy family on the same diet.

Sir,—In the *Times* newspaper of the 4th instant, you are reported to have said, " That you had found, to your surprise, that for the first fortnight of an untried prisoner's incarceration he was subjected to the lowest possible diet, being denied, in fact, all animal food for the first fourteen days of his confinement ;" you obviously would represent this restriction from animal food as a most inhuman and injurious treatment.

I apprehend it to be impossible for you not to know that the experience of all ages has proved, that the healthy man can be perfectly nourished without using a particle of animal food. I will fearlessly assert, from long experience, that vegetable food is much more salubrious than mixed diet in common use, in which, however, animal matter commonly enters in the smallest proportion. Numerous instances may be cited of persons who have lived for years in very good health without animal food ; but I will here content myself with very shortly informing you of my personal experience in this matter.

In the year 1804 (in January) I resolved to confine myself to a strict vegetable diet ; I was induced to this by severe bodily suffering. In this course I have persevered, without deviation, to the present time, now more than thirty-eight years, and by its means have now advanced considerably in my eightieth year. The diet has been aided by other measures, which I need not enter into. I have brought up a large family on the same plan with perfect success. My eldest son, who was in childhood very delicate, with an obvious consumptive tendency, has used the same regimen for an equal length of time, and is in perfect health ; and I could cite numerous instances of its beneficial effects in various individuals.

I am no advocate for starvation, and opposed, certainly, to a mere bread and water diet. Indeed, I cannot approve of any fixed dietary, it being abhorrent to nature, which delights in variety,—the vegetable kingdom affords variety sufficient to satisfy any healthy appetite.

I have addressed to you these facts, as, in the station you hold as a member of Parliament, what falls from you on medical subjects may have considerable influence either for good or for evil ; and I shall be sorry to see

talents of no mean order employed to fortify vulgar prejudices, or disseminate erroneous opinions.   I am, Sir, your obedient servant,

WM. LAMBE, M.D.

Brompton, July 6, 1844.

PATHOLOGY AND PRACTICE OF MEDICINE.

Alkaline Treatment of Tuberculous Consumption.—J. S. CAMPBELL, PASCAL, LOUIS.

Two or three years ago Dr J. S. Campbell published a book on Tuberculous Consumption, in which he advocated the utility of alkaline treatment, and reported some cases in which he believed the disease had been stopped in its progress by this mode of treatment.   In a recent number of the Lancet (Saturday, 10th August 1844) he has inserted a paper on the same subject, in which he answers some of the objections made to his views, states the result of his former cases, and refers to numerous other cases in which, as he thinks, the same treatment was effectual.   Dr Campbell appears to be well aware that on such a subject incredulity is justly regarded among his brethren as a virtue.   He has accordingly taken some pains, by reference to auscultation and percussion, to convince us that the cases treated, or at least the major part of them, were really cases of progressive tuberculous phthisis, of which hereafter.

We cannot take time at present to inquire how far this kind of treatment has been practised in past times.   We admit, however, that the treatment of phthisis by alkalies forms no part of the established stock of a medical man's knowledge.   Dr Campbell's remedy is the solution of eaustic potass, and therefore does differ, though but slightly, from that mentioned in the passage we are about to quote.

We find the following passage in the last edition of M. Louis' work on phthisis—we quote the Sydenham Society's translation.   " Very recently, and about the same time (about 1835) that M. Latour believed himself called upon to counsel the use of sea-salt in the treatment of phthisis, M. Pascal of Strasburg recommended the sub-carbonate of potass against the disease.   M. Pascal founded his recommendation, *à priori*, on the discutient property of the alkaline salts, and more especially of the sub-carbonate of potass, in engorgements of various kinds.   M. Pascal compasses the cure of phthisis by dissolving the albumen, which he says forms the greater part of tumours and engorgements of all descriptions ; while M. Latour fancies he has arrived at the same result by means of sea-salt, not through any solvent property possessed by it (for of this he makes no mention), but through its special tonic properties, seconding the action of a succulent and tonic regimen.

" But if the cases of M. Latour leave much to be wished for, on account of the poverty of the details accompanying them, those of M. Pascal are so deficient in this respect, that it is really impossible to determine under what affections his patients laboured.'   I have considered myself for this reason absolved, at least for the present, from the duty of trying sub-carbonate of potass."   P. 515.

We have no purpose of extending the censure passed by M. Louis on M. Pascal to Dr Campbell.   Yet Dr Campbell must excuse us if we pronounce the evidence produced in favour of this treatment still unsatisfactory. The cases in his book are too few, and the account of his subsequent cases in his late paper too vague, to bring conviction on a subject which requires

evidence only short of that admissible in favour of a remedy claiming to cure scirrhus or medullary sarcoma.

For the present, then, we can only speculate on the *à priori* merits of the treatment, or consider whether or not Dr C.'s statements warrant us to make a trial of it. Against the trial of alkaline treatment in any disease in which no established successful treatment exists, no considerable objection can be urged. Though potass hardly enters into the constitution of the fluids or solids of the living frame, it cannot be regarded as foreign to the system in the sense of a noxious agent. With all vegetable aliment much potass enters the system, and since it is little required as a constituent, it must be continually thrown off by excretion,—as it would seem, chiefly by the kidney. The physiological effects of alkalies, and of potass in particular, have been unaccountably neglected ;—they are beneficial in several diseases without any satisfactory reason being assignable. Potass is plainly not merely a local remedy, or a remedy on the urinary function alone, as in its antacid and antilithic operation ; it is undoubtedly a constitutional remedy ; witness its effects on some of the most obstinate forms of chronic cutaneous diseases. On the whole, then, we think it would be unreasonable scepticism to refuse altogether to give Dr C.'s remedy the benefit of a trial ; nor do we believe that any inconvenience will result, in most cases of phthisis, so long as it does not derange the urinary function. We would caution our sanguine readers against indulging too readily in the idea entertained by Pascal that potass is a solvent of the constituent albumen of tubercle.

If a trial is to be made of alkaline treatment, we certainly think that Dr C.'s remedy should be preferred ; for, though many eminent authorities maintain that the liquor potassæ cannot have any other final effect on the body than the carbonate into which it must pass, we nevertheless conceive, that in making trials declared to be warranted by experience, the original directions as far as practicable should be followed. Twenty drops of the liquor potassæ three times a-day, cautiously increased, will make a proper trial.

New Method of Detecting Sugar in Diabetic Urine. By Dr CAPEZZUOLI.

SOME grains of the hydrated oxide of copper are to be mixed with as much solution of caustic potass as to retain a sensible alkaline quality in the liquid. This is added to the suspected urine at a common temperature. The urine becomes turbid, but a copious precipitate soon falls down. The precipitate is at first of a sky-blue colour, then, after a few hours, a circle of canary yellow forms at the surface of the mass, and usually covers it entirely. Afterwards a red colour more or less deep, in the form of a zone, is substituted for the yellow either wholly or in part. These changes are completed within twenty-four hours, and depend on the reaction of the sugar on the oxide of copper. The oxide is by degrees despoiled of its oxygen, and brought to the metallic state. The sugar, by the absorption of oxygen, is transformed chiefly into formic acid, which combines with the potass. The reaction is strong with the sugar of grapes, of which diabetic sugar is a form. The yellow zone, succeeded by the red zone, is a genuine sign of the presence of sugar in diabetic urine, for these changes are not produced in the healthy state, nor in any other disease of the urine.— Abridged from the author's account.—See *Gazette Toscane*, 1843, *Rev. Méd.*, and *Journal de Pharmacie*, Juillet 1844.

Composition of Chlorotic Blood and Urine, and Effect of Ferruginous Preparations. By M. HERBERGER.

(*Buchner's Repertorium,* vol. xxix. 1843, p. 236.)

THE blood of a girl twenty years of age, who was chlorotic in the highest degree, but was otherwise robust, yielded a tolerably firm clot, but no traces of inflammatory crust. This blood was composed of 868 parts of water and 131 parts of solid matter in 1000. After two months' use of ferruginous preparations, the same girl's blood yielded 807 parts of water and 192 parts of solid matter in 1000. The solid matter in the two specimens of blood yielded respectively in 1000 parts—

	Chlorotic blood.	Blood after cure.
Fibrine,	3.609	1.950
Globuline,	36.470	94.290
Albumen,	75.200	81.509
Hematosin,	1.590	4.029
Fatty matter,	2.310	2.470
Extractive and salts,	8.921	8.263
Loss,	0.500	0.409

The urine was examined three times on different days before she was put on the use of ferruginous preparations, and twice after the cure, with the following results:

1000 parts of urine during disease yielded

	(1)	(2)	(3)
Water,	975.43	978.21	971.98
Solid matters,	24.57	21.79	28.02

The solid matters were composed of

	(1)	(2)	(3)
Urea,	7.04	7.00	7.12
Uric acid,	0.13	0.21	0.19
Extractive matter,	10.48	9.00	13.99
Salts,	6.80	5.50	6 62
Loss,	0.12	0.08	0.10

1000 parts of urine after cure yielded

	(1)	(2)
Water,	940.16	938.70
Solid Matter,	59.84	61.30

The solids were composed of

	(1)	(2)
Urea,	26.84	27.36
Uric acid,	0.94	0.96
Extractive matter,	18.62	16.28
Salts,	13.32	15.71
Loss,	0.12	0.99

During the treatment M. Herberger states that, contrary to the assertions of Gelis and Wohler, the urine distinctly contained iron, which was very perceptible in that passed in the morning; he also states that the iron was contained in the sweat.

———

Cryptogamic Vegetations in the Stomach.

M. GRUBY communicated the case of a female in whose stomach cryptogamic vegetations were spontaneously formed. She had been subject to vomiting for four years, and it was in the matters vomited that he had found these formations; after fasting twelve hours she still vomited cryptogami. On introducing a piece of sponge by means of a sound, he was enabled to

withdraw them from the stomach. The sponge also brought them up from the inferior portion of the œsophagus, but not from the superior. No traces of the cryptogami were found in the alimentary substances ingested, which were carefully examined. Their production seems to diminish under the influence of alkaline drinks and of brandy, and to increase under that of a vegetable alimentation. A purely animal regimen does not, however, appear to weaken it.*

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

On the Use of Tincture of Opium in the Scrofulous Ophthalmia of Children.

" Among the very numerous substances which have been recommended as useful and curative in scrofulous ophthalmia, I may mention tincture of opium ; it is used either diffused in water as a lotion, or mixed with lard as an ointment, and is seldom used pure. Lately, however, Kopp has recommended in this disease compresses to be dipped in the undiluted tincture and laid on the eye, together with the internal administration of the extract of conium maculatum. I have latterly treated all my cases in this way, and have invariably been surprised at the successful results ; and never has this method of treatment failed, whether the inflammation was accompanied simply with intolerance of light without redness, or with both redness and epiphora. The amendment of the disease generally appears in a few days after the use of the compresses, and in many cases it was so exceedingly rapid that I ascribed it to the influence of the conium ; but in one instance which had resisted all other means, and where the child could not be got to take the extract, the disease was cured by means of the compresses alone. Since then I have used the tincture of opium with the most marked benefit, more especially in the torpid form of ophthalmia. As an alterative for internal administration, I prefer before all other means the extract of conium maculatum according to the formula of Dzondi and Kopp."—*Dr Bennewitz in the Journal für Kinderkank*, Bd. I. Hft. 3.

Diarrhœa in Children treated with Injections of Nitrate of Silver.

" In many children that died under excessive vomiting and diarrhœa, I found the large intestine red, swollen, softened, and ulcerated ; and from these appearances concluded that, to cure the disease, the remedies ought to be locally applied ; and accordingly I prescribed enemata containing nitrate of silver, and administered the same substance internally. The dose for the enema was $\frac{2}{3}$ gr. in ℥iij. of water, and the mixture to be given by the mouth consisted of

Nit. argent.	. . .	$\frac{1}{6}$ gr.
Aquæ font.	. . . .	℥j.
Syrup simp.	. . .	℥x. M.

To be taken in the course of twenty-four hours in doses of a teaspoonful at a time.

In some cases the diarrhœa obstinately continued, and then I modified the procedure of injection in the following manner : *immediately* after the enema of nit. argent. was administered, I gave a second injection of pure water, so that, without increasing the quantity of the caustic, its action was extended further up the intestine." A case is here given of a dropsical and rachitic child affected with diarrhœa for several months, but after the in-

---

* See Wilson on the Sarcina Ventriculi, *North. Journ. of Med.*, No. III.

jection of $\frac{2}{3}$ grs. of nit. argent. in ℥vj. of water, with the supplemental injection of an equal quantity of pure water, the diarrhœa from that time ceased.

" In violent diarrhœas my treatment is, to commence with an emetic of from 25 to 40 grs. of pulv. ipecacuan. in syrup, every five or eight minutes. If the child is still on the breast, it must have nothing but the mother's milk ; if weaned, it may have milk mixed with barley-water. In addition to this, I give the enema of nit. argent. as above prescribed, or varied in strength with the age of the child ; and along with it I administer a mixture of nit. argent. (*vid. sup.*), nit. bismuth., or chalk combined with extract of ratany root."—*Trousseau's Klinik Journ. für Kinderkank*, Bd. I., Hft. 3. —Since reading the above, we have tried the enema and mixture in one or two instances, and have found this mode of treatment perfectly successful, so far as our sphere of observation has extended ; we therefore recommend it to practitioners for further investigation.

On Eneuresis Nocturna, or Incontinence of Urine during Sleep.   By Prof. Romberg.

" Girls suffer from this affection more frequently than boys.   It is considered to depend on paralysis of the neck of the bladder ; and hence the cold douche, decoction of cinchona, and the preparations of iron, have all been recommended for its cure, but without benefit, for the source of the affection is quite different.   In the healthy state of the mucous membrane of the bladder, two points appear to possess greater sensibility than the rest,— these are the openings of the ureters.   We know this, because when, in making an examination of the bladder with the sound, we touch these points, an excessive desire to make urine is felt.   If, then, the mucous membrane of the bladder is diseased, the irritation of the urine will be most keenly felt on those parts which are more sensitive than the rest, and this irritation will act through rapid reflection on the *musc. detrus. urin.*, and the more easily during sleep, as in that state the power of the will over the reflex functions is inactive.   On these grounds, then, I recommend you, in such cases, to cause the children to be made to lie on the belly, so as to protect these points of the bladder as long as possible from the irritation of the urine, and to diminish this property of the fluid, mucilaginous drinks are to be allowed."

We have never failed to remedy incontinence of urine in children by constitutional tonic treatment, conjoined with an occasional blister on the sacrum ; and when these were tedious in their operation, nux vomica in powder, or in the form of extract in minute doses, has been highly successful.   The treatment recommended by Romberg, founded on his ingenious hypothesis, may be useful as an adjunct, but cannot supersede the other means.

FORENSIC MEDICINE AND MEDICAL POLICE.

Statistics of the Transmission of Insanity.   By M. Baillarger.

M. B. proposes to determine the three following questions :—

1. Is hereditary insanity more commonly derived from the mother than from the father ?   2. Is the disease of the mother communicated to a greater number of children than is the disease of the father ?   3. Is insanity more commonly transmitted to daughters from the mother and to sons from the father ?

First question.—In 453 cases of directly transmitted hereditary insanity, the disease was derived

From the mother,   .   .   271.
...   father,   .   .   .   182.

The difference is 89, or $\frac{1}{3}$.

Second question.—In 271 families in which insanity was derived from the mother, the disease, at the period when inquiries were made, had appeared

In 203 families in 1 child in each.
...   62   ...   2 children.
...   5   ...   3   ...
...   1   ...   4   ...

Total number of insane children, 346.

The madness of the mother, then, was transmitted to several children 70 times out of 271—that is to say, in upwards of one-fourth of the cases. With respect to madness derived from the father, M. B. found, that in 182 families in which the disease had this origin, the malady, at the time the inquiries were made, had affected,

In 152 families, 1 child in each.
...   26   ...   2 children.
...   4   ...   3   ...

Total number of insane children, 216.

The madness of the father had then been transmitted to several children, in 30 out of 182 instances—*i. e.* in one-sixth of the cases. Consequently the madness of the mother, while it is more frequently hereditary than that of the father, seems also more prone to attack a greater number of children.

Third question.—Among 346 children who inherited insanity from the mother, there were 197 daughters and 149 boys; the difference is 48, or one-fourth. Among 215 children who inherited insanity from the father, there were 128 sons and 87 daughters; the difference is 41, or one-third. Madness of the mother, therefore, is more frequently transmitted to the daughters than to the sons, in the proportion of one-fourth; while the madness of the father, on the contrary, affects the sons more frequently than the daughters, in the proportion of one-third. On comparing these results, two other interesting inferences may be deduced from them. We find, in fact, that of 277 sons, 169 derived the disease from their mother, 128 from the father; the difference is scarcely one-sixth. In the daughters, on the contrary, this difference is much greater; and this seems a more interesting result than any of the foregoing ones. Of 274 insane daughters, 189 derived their insanity from the mother, 85 only from the father; the difference is 104, or more than one-half; whence follows the conclusion, that sons derive insanity almost as frequently from their father as from their mother; but that daughters, on the contrary, inherit the disease from the mother at least twice as frequently as from the father.—The foregoing numbers lead to the following results regarding the prognosis we should give respecting children born of an insane parent. 1. Madness of the mother has a more formidable hereditary influence than that of the father, not only because it more frequently becomes hereditary, but also because it is liable to attack a greater number of children. 2. Transmission of madness from the mother is more to be apprehended for the daughters than for the sons; that of the father, on the contrary, is more liable to affect the sons. 3. Transmission of madness from the mother to the sons is scarcely more to be apprehended than when the father is affected; but it is twice as likely to affect the daughters.—*Dublin Med. Press,* May 22, No. 281, p. 328.

DANGEROUS OR FATAL CONSEQUENCES FROM SLIGHT WOUNDS.

As medical witnesses are frequently annoyed in court with questions as to how slight a wound may be productive of dangerous or fatal consequences, we extract the two following cases.

Wound in the Thorax from a common Sewing-Needle.

AN artillery-man stated, that having stuck a sewing-needle in the lining of the left side of his jacket, on his lifting a large body, it had been forced into the skin. On external examination nothing but a slight red point could be discovered ; the surgeon made an incision, but finding no trace of the needle desisted from farther interference. In twenty-four hours thereafter the man was attacked with fever, violent pain in the breast, and, in short, all the symptoms of pericarditis, and asserted, that at each heart-stroke he felt the prick of the needle. Under these circumstances, the regimental surgeon made a crucial incision at the point indicated by the patient, between the fifth and sixth ribs, and, after a tedious and careful dissection among the soft parts and intercostal muscles, the needle was at length felt with the knife, and easily extracted. The needle was one inch and a quarter in length, and fine, with the eye directed towards the thoracic cavity, and had already become rough on its surface. Under the usual antiphlogistic treatment the patient was in four weeks so far recovered as to be able to leave the hospital.—*Medizin Zeit. Jarhg.*, XII. No. 30.

Death from the Paring of a Corn.

A STOUT and healthy labourer affected with a corn on the little toe, cut it rather deeply, and, in spite of the pain, continued to attend to his work for several days ; no local alteration could be seen, except ecchymosis and some slight puffiness of the sole of the foot ; he was soon, however, seized with extreme difficulty of deglutition and articulation, unusual brilliancy of the eyes, with full pulse, and died the same evening. On examination after death, pus was found under the integuments of the foot, and blood in the bursa mucosa over the joint of the toe.—*Caspar's Wochensch.*, *No.* 6, 1844.

PART IV.—MEDICAL MEMORANDA.

Evacuation of an Infant's Stomach, in a Case of Poisoning, by means of a Male Elastic Catheter adjusted to a Stomach-Pump.—Mode of Decanting the Stomach by a Flexible Tube without a Stomach-Pump.

IN a late number of the Lancet (Saturday, 10th August), Mr D. Thompson of Stalybridge relates a case in which he succeeded in saving an infant (æt. six months), to whom a teaspoonful of laudanum had been administered by mistake. Vomiting could not be excited by emetics, and having no œsophagus tube narrow enough for an infant, he introduced an elastic gum catheter, the end of which he attached to the stomach-pump, and withdrew the poison.

Considering how susceptible infants are of the effects of opium, we cannot doubt that Mr Thompson saved the infant's life in this case by his ready contrivance.

We take this opportunity of drawing the attention of our readers to the facility with which the stomach can be emptied and repeatedly washed

out without a stomach-pump by means of a simple flexible tube. When the siphon is spoken of for the evacuation of the stomach, one is apt to think of something very complex and difficult to manage. Yet nothing can be easier. Mr Bryce's siphon is highly ingenious, but cumbrous and unnecessary. When the common gullet-tube, such as is sold with the stomach-pump, has been introduced down to the stomach, all that is necessary is to pour water into its extremity by means of a lipped vessel ; and this is for the most part easy, unless the tube be very narrow. As soon as a sufficient quantity of water has been poured in, the head of the patient is to be bent down till the mouth falls below the level of the stomach, when the fluid contents of the organ rush out in a full stream. Thus the process of washing out the stomach may be repeated many times by this method, for once that it can be done by means of the stomach-pump. The tube in this case does not act the part of a siphon—it would become a siphon if it were long enough to reach externally below the pit of the stomach, in which case the contents of the stomach would continue to be discharged after the head had been raised to its usual position. The process first described is in fact a process of decantation, and this appears to us to be the best name for it. It differs in no respect from the decanting of liquor from a bottle, except that no air enters, the capacity of the stomach itself being diminished as the fluid issues, because it is subjected to the pressure of the atmosphere through the yielding parietes of the abdominal cavity.

No doubt the introduction of water into the stomach is troublesome when the tube is narrow ; but even when this difficulty cannot be overcome, and the pump is required to throw it in, much time will be saved if it be drawn off again by bending the body down instead of by the slow action of the pump.

However narrow the tube, if a common funnel be at hand, and the upper end of the tube be adjusted to its pipe by a bit of wet tow or rag, the difficulty will be overcome. If the tubular gag of horn usually contained in the box with the stomach-pump be not required to prevent the patient from biting the flexible tube, we find it may be easily made to answer the purpose of a funnel.

Since we offered some observations on the advantages of this kind of evacuation over the stomach-pump,[*] we have had an opportunity of verifying them in a case of poisoning by laudanum. One day last spring, at the Royal Dispensary, during the visit, a woman in the immediate neighbourhood was reported to have been in an insensible state for several hours. On reaching the house we found her without any signs of life, except that the body was still warm. From the account given by the people of the house, it appeared that she had taken laudanum, most probably for the purpose of destroying herself. The usual means were put in practice, and among others, a flexible tube was introduced into the stomach. As the only tube at hand was unusually small, and no proper lipped vessel could be procured, the water was chiefly thrown into the stomach by the stomach-pump—but after a proper quantity had been introduced, no sooner was the syringe removed, and the head bent down, than the water rushed out rapidly, notwithstanding the narrowness of the tube, bringing with it the

---

[*] Observations on a New Form of the Stomach-pump and Enema Syringe, and on the Use of the Œsophagus-tube instead of the Stomach-pump. By William Seller, M. D., &c.—Scottish and North of England Medical Gazette, No. 3 (4th Nov. 1843).

contents of the stomach, which consisted merely of a turbid fluid. And this process was repeated several times with the greatest facility. The case was, however, too far gone for recovery.

National Benevolent Institution.—Mrs CULLEN BROWN, *Daughter of* JOHN BROWN, *the Author of the once celebrated Brunonian System.*

WE have received some papers, from which it appears, that the daughter of the celebrated John Brown, now sixty-nine years of age, is at present making a seventh application to be placed on the Roll of the National Benevolent Institution in London—which will entitle her to receive thirty pounds per annum. This application will be determined in November by the votes of a host of subscribers, whose names fill a book now before us of about 300 pages. If any of our readers be subscribers or have friends among the subscribers, we could not recommend to them a more benevolent object in connection with the medical profession.

John Brown was undoubtedly a man of genius, and his system cannot fail to be remembered while the history of medicine lasts. Its popularity was as extensive as it was short lived, and it shared the fate of all systems of medicine which seek to raise at once, by a single effort, what can only be attained by the labour of ages. If his system has been applied by some to purposes too much akin to quackery, John Brown himself was not a quack ; and the poverty in which he left his family proves that the profit to which his system might have been turned among credulous people was no part of his object.

The statement in these papers is as follows :—" Mrs Cullen Brown, aged sixty-nine, is the only surviving daughter of the celebrated Dr John Brown of Edinburgh, who died suddenly in the year 1788, leaving a widow and eight children totally unprovided for. Mrs Cullen Brown has struggled hard to support herself by teaching and by literary labours, but being now very feeble and infirm, is no longer capable of such exertions. She has survived most of her friends, particularly some of the most respectable of the medical profession, and is reduced to great distress."

Proxies will be received by Mr Vickery, 37 Great Marylebone Street.

Mrs Sophia Baillie, of 33 Cavendish Square, takes charge of the balloting papers in favour of Mrs Brown.

Fever in Irish Farm-houses.

" THERE is, however, one class of persons—the *comfortable* farmers—who, though constantly recommended for gratuitous relief, generally keep their fever cases at home. It soon spreads through the family, though all communication is cut off with ' the sick-room,' the door being built up with sods, and a hole made in the back wall, through which the doctor must scramble in the best way he can upon all-fours into an apartment which is almost invariably dirty, damp, and dark."—*Dublin Med. Press*, 281, p. 325. *Report of an Irish Dispensary.*

PART I.—ORIGINAL ARTICLES.

On Deafness, caused by Hemorrhage into the Cavity of the Tympanum, successfully treated by Perforation of the Membrane: with Statistic Observations on the Results of this Operation generally. By JAMES MERCER, M. D., F. R. C. S. E., Lecturer on Anatomy, &c., Edinburgh.

UNTIL the late Sir A. Cooper published his Memoirs in the Philosophical Transactions,* the operation of perforation of the membrana tympani for the relief of deafness had been very seldom had recourse to, or if so, it must have been attended with such success as must have precluded it either from being taken general notice of by surgical writers, or it had been set altogether aside from the list of remedies that were usually employed in the treatment of such cases.

From the very successful results, however, that attended its performance in his hands, and more especially from the statement with which he concludes his second memoir, that, " as a further encouragement, in the operation I have mentioned, little pain is felt, no dangerous consequences follow, and even if it is performed unsuccessfully, the patient is left with the same capacity as before of receiving relief from other remedies," this operation became for a short period " the mania of the day," and was had recourse to promiscuously, in all cases of chronic deafness, that had withstood even for a short time the application of the comparatively simple means that were then employed.

---

* Philosoph. Trans, 1800-1801.

2 Y

Sir A. Cooper, however, pointed out particularly two morbid conditions of the accessory organs of hearing, in which the operation should be tried ; viz., " in closure of the Eustachian tube," and, secondly, " for the removal of blood that had been extravasated into the cavity of the tympanum;" and to these have been added, by Deleau,* Saissy,† and Kramer,‡ a " morbidly thickened and cartilaginous condition of the membrana tympani."

Instances of the first and last of these forms of disease are by no means uncommon in practice, and indeed, from the observations of the above-named authors, as well as from those of Himly,§ Beck,‖ and Itard,¶ they would appear to constitute a very common complication in many of the diseases of the ear that give rise to deafness. In many of these instances, also, the operation of perforation of the membrane has been had recourse to for their relief ; but in the majority of them it has signally failed : and it is unfortunate that, amongst all the information that has been brought forth on the subject, nothing like statistical details of its results have been given.

Through the kindness of many professional friends in this city and throughout the country, I have had many facilities afforded me for observing acoustic diseases, and during the last five years I have performed this operation, both as a palliative and as a radical means of cure, in twenty-seven different cases. Out of this number I selected fifteen that were well marked, and as coming particularly under the above-mentioned conditions of disease ; six of them being instances of chronic morbid thickening of the membrana tympani, and nine of insurmountable obstruction, by stricture, of the Eustachian tube. *In only one instance* out of this number (fifteen) have I met with complete success, and that in a case of the latter form of disease. In all these cases a most careful examination and exploration of the accessory organs of hearing was made, both by the use of the speculum and artificial illumination, as also by the repeated aplication of the air douche and the solid wax and silver bougie ; and every case, also, was, as far as possible, selected from being apparently uncomplicated with any other morbid condition of the other structures of the tympanum or of the internal ear.

Subjoined, I have classified these in a tabular form ; the first six being cases of morbid thickening of the membrana tympani, and the remaining nine consisting of those of insuperable obstruction in the Eustachian tube.

---

* Mémoire sur la Perforation de la Mem. de Tymp., p. 29, Paris, 1822.
† Essai sur les Malad. de l'Oreille interne, p. 70, Paris, 1827.
‡ Diseases of the Ear, translated by Dr J. R. Bennett, p. 154, London, 1837.
§ Comment. Soc. Reg. Scient. Götting., vol. xvi. p. 117.
‖ Die krankheiten des Gehörorgans, Heidelberg, 1827.
¶ Mémoires de l'Académie Royale de Médicine, tome v. p. 535, Paris, 1836.

Tabular View.

Case	Sex	Age	Conditions of—Memb. Tympani.	Eustach. Tubes.	Auditory Nerve.	Duration.	Cause.	No. of times operated on.	Result.
1	F.	45	Both much thickened and insensible on touch.	Both pervious; no gurgling.	Perceptive on contact.	3 years.	Caries of ext. meat.	Four times.	No effect.
2	F.	7½	Both thickened.	Ditto	Hearing distance 1½ and 2 inches.	1½ year.	Repeated abscesses of ext. meat.	Twice.	No effect.
3	M.	10	Both nearly cartilaginous.	Ditto	Perceptive on contact.	4 years.	Scarlatina.	Four times.	No effect.
4	F.	32	Both thickened.	Ditto	Hearing distance 1 and 2½ inches.	10 years	Caries with polypus of ext. meat.	Twice.	No effect.
5	M.	23	One destroyed. One thickened.	Ditto	Perceptive on contact.	3 years.	Eczema of meat.	Twice.	No effect.
6	F.	15	Both thickened.	Ditto	Ditto	1 year.	Inf. of memb tymp.	Twice.	No effect.
7	F.	8	Both healthy.	Both impervious	1 inch each.	2 years.	Scarlatina.	Twice.	No effect.
8	M.	11	Slightly thickened	Ditto	Only on contact.	3 years.	Scarlatina.	Thrice.	No effect.
9	M.	26	Healthy.	Ditto	1 and 2 inches distance.	1½ year.	Syph. ulceration of throat.	Thrice.	No effect.
10	F.	8	Slightly thickened	Ditto	Only on contact.	3 years.	Measles.	Twice.	No effect.
11	M.	9	Healthy.	Ditto	1 and 1½ inch distance.	1 year.	Repeated catarrh.	Twice.	No effect.
12	F.	17	Slightly thickened	Ditto	Only on contact.	7 years.	Scarlatina.	Thrice.	No effect.
13	M.	28	Healthy.	Ditto	Only on contact.	3 years.	Syph. ulceration of throat.	Twice.	No effect.
14	F.	27	Healthy.	Ditto	2 and 2½ inches.	2 years.	Repeated catarrh.	Twice.	No effect.
15	M.	32	Healthy.	Ditto	Only on contact.	3 years.	Repeated catarrh.	Thrice.	*Successful*

If it were legitimate, therefore, to generalize from the above number of cases, I might conclude, as Itard has done, that " nothing is more rare than a cure of deafness by perforation of the membrana tympani."*

I may also mention, that the successful case above recorded has still continued so, though more than two years have elapsed since the operation was performed. The reason why the repetition of the operation was three times required was caused by subsequent rapid regeneration of that part of the membrane that was removed, and the consequent closure of the artificial aperture. At each perforation the success was complete, but it was not until the third attempt that I did succeed in preventing closure. Having examined this patient lately, I find that they still continue open, and with a permanent prospect of remaining so; and the hearing in both ears is as perfect as ever.

The second condition alluded to by Sir A. Cooper as requiring the operation, viz. "for the removal of extravasated or accumulated blood in the cavity of the tympanum," appears to have constituted a very rare practical occurrence; for, with the exception

* Itard, loc. cit. et Recherches Pratiques sur les Malad. de l'Oreille, p. 44, Paris, 1838; and also Cycloped. of Pract. Surgery, article Ear and Hearing, Diseases of, by T. Wharton Jones, F. R. S.

of the successful case which he narrates, I am not aware at present of another having been presented to the notice of the profession.

I have lately, however, met with another and somewhat similar case, and in which success also attended its treatment by perforation of the membrane; but as there appears to be a difference as to their proximate pathological causes, I shall, before entering into the details of this case, refer more particularly to that of Sir Astley.

" Mr Brandon of Upper Clapton," says he, " sent a person to me in January last (1801), *who had received a blow upon his head*, which had caused symptoms of concussion of the brain, and was attended with a discharge of blood from each ear. From the effects which the blow had occasioned on the brain he speedily recovered, but the deafness which had immediately followed from the accident continued. I cleared the meatus from the blood which it contained without any relief being derived to the patient; and, suspecting that a quantity of blood was lodged in the tympanum, and the vibration of the membrane thus prevented, I some days after punctured the membrana tympani. Upon withdrawing the instrument, some dark-coloured blood appeared on its point; and, whenever I examined his ear afterwards, there was the same appearance of blood mixed with the wax of the ear, which continued to discharge for about ten days after the operation, during which period the hearing was gradually restored.

" I have formerly known instances of permanent deafness from this cause; and I think it not improbable that the blood thus effused has become organized, and continued to fill the cavity of the tympanum."*

From the narration of the above case, it must be inferred that, from a blow having been received, and blood having been discharged immediately thereafter from each ear, together with its subsequent discharge in a fluid form for ten days after the perforation of the membrane, the deafness was consequent on these, and symptomatic of a counter fissure of the petrous portions of the temporal bones, involving the thin osseous plates that form the roof of the meatus and the tympanic cavity.

This opinion, however, is merely an inference drawn from the statement of the extrinsic symptoms of the case, as made by Sir Astley; and as the mode of examination at that period was very defective, no notice has been taken by him as to the actual condition of the structure of the organs. If counter fissure did exist, it must have extended across the entire base of the cranium, involving the sphenoid and both temporal bones, as well as the soft structures of the external and middle ears; and if such a condition did not exist, the hemorrhage must have been de-

---

* Philos. Trans., 1801, page 444.

rived from the capillary vessels of the parts. That such a form of local hemorrhage does occur as an idiopathic form, the case that I lately observed will evidently show.

—— Frier, æt. 19, by trade a butcher, and of a stout plethoric habit of body, applied to me on 2d July last for the relief of " a spitting of blood and a deafness." On questioning him as to the causes of these complaints, I found that, for six years previously, he had laboured under considerable deafness, especially in the right ear, which he said was almost useless to him, and consequently he had depended for some considerable time on the remaining integrity of the left. Having had occasion, about three weeks previous to application, to proceed to a country market to bring home some cattle, he was much exposed to cold, moisture, and fatigue, which were followed by a catarrhal affection that lasted for ten days, and accompanied with total deafness. About a week previous to my seeing him, the catarrhal symptoms had subsided, and the left ear had again recovered its usual power of hearing, though the right had not.

On awakening the morning previous to his visit, he felt as if a quantity of saliva had collected in his mouth during the night, and, on spitting it on the floor, found it to consist chiefly of coagulated blood. This was repeated four or five times, and with nearly the same effect ; but he did not, at any of these times, either cough or vomit, and he felt distinctly as if the blood had come from the back part of his mouth. On removing a dossil of wool, which he had been in the habit of keeping in either ear, he found that which had been over night in the left to be slightly besmeared with blood, at the same time that the tube itself felt as if contracted and very dry. He also found himself so deaf that he could not hear what was addressed to him. There was no tinnitus in this ear of any kind, nor was there any feeling of air being passed into the tympanum during forcible blowing of the nose.

From the train of symptoms thus detailed, I suspected that there existed intra-tympanal hemorrhage, and accordingly examined very carefully ; and before doing so I syringed out the meatus, and then dried it carefully throughout by a dossil of cotton wadding. On applying the watch, I found it could only be heard when placed in contact with the head. By throwing a strong light along the speculum, I found the lining membrane of the meatus to be of a uniform redness and very much congested, but no evidence of a solution of continuity in any part of its structure.

The membrana tympani, instead of its normal, transparent, gray appearance, had a dull brown colour, and was slightly congested at the margin ; the vertical line, indicating the handle of the malleus, was lost in the surrounding colour, and the mem-

brane, instead of presenting its concave appearance, seemed pushed outwards into the meatus. On touching it with a probe it was almost insensible, and pressure against it produced an elastic pitting. The lining membrane of the soft palate and fauces also presented a vascular appearance, but there was no enlargement of the tonsils. On placing a catheter in the corresponding Eustachian tube, and then applying the air douche, not the slightest stream could be made to pass along it into the tympanum, though 60 cubic inches of air were condensed and applied in full force. A catgut and also a silver wire bougie were tried, but without effect ; and failing also to remove the obstruction by the water douche, I had no alternative but to try and evacuate the cavity of the tympanum by perforation of the membrane.

The hearing distance on the right side was two inches ; the membrana tympani was congested and swollen ; and the Eustachian tube was also tender and swollen, and slightly obstructed with mucus, which was easily dispersed by inflation. This side therefore was evidently labouring under the same catarrhal affection as the general mucous membrane of the fauces, and would require to be treated accordingly.

The head was carefully supported in the hands of my assistant Mr Fowler, with the left ear turned up, and the auricle drawn towards the vertex. The speculum being introduced as far as the second curve of the meatus, and then expanded, with a clear and steady light, the anterior and inferior part of the membrane was perforated, and a small portion of it removed by an instrument similar to that represented in the margin.*

On the instrument being passed through the membrane, it felt as if its entire cutting head had got into the cavity amongst some doughy substance ; and when the size of this portion of it is considered in relation to the transverse diameter of the cavity at the point of perforation, it will be observed that the area of the tympanum had been considerably increased. Little pain was evinced by the patient, and on withdrawing the instrument its surfaces were besmeared with blood. The meatus was immediately syringed out with water about 90° Fahr., and the first injection, besides being tinged with the blood-particles from the lacerated membrane, brought out also a large portion of partially decolorized fibrine from the cavity of the tympanum. This injection was repeated for about one minute, and was attended with the discharge of several other pieces of flocculent fibrine; but giddiness and considerable weight and pain in the ear coming on, caused me to desist.

* The perforator above represented (which has been reversed by the artist in its cutting edges), is the cutting part of that proposed and figured by

After these had subsided, the watch was reapplied, and the hearing distance, which before the operation was only in contact with the head, had now risen to four inches from the auricle. Pleased with the relief thus obtained, the patient objected to any thing further being done at present, and I was thereby prevented from washing out the cavity by means of the Eustachian tube, which would have been attended with a more speedy and perfect evacuation of its contents. The fibrine that had been discharged was collected on a filter, and after being slightly pressed between the folds of bibulous paper, weighed 9½ grains apothecaries' weight. Its microscopic characters were very distinct.

July 4. Had spent a good night, but had still a slight degree of pain in the left ear; no blood had been discharged from the meatus; the membrana tympani was red and tumid, especially around the edges of the aperture, which was still open. Hearing distance, left side four inches, right side only on contact.

I passed a catheter into the left Eustachian tube, and gently inflated the tympanum. The air was distinctly heard to pass into this cavity, and through the artificial aperture into the meatus. Its course, however, felt considerably obstructed; but on being continued for a short time it became more free and of greater volume, and the gurgling noise attending it at first disappeared. The hearing distance six inches. Syringed out the meatus, and brought away a few more shreds of fibrine that had been dislodged by the inflation. Applied two leeches to either concha, and a blister behind either ear.

July 6. Leeches had bled freely, and the blisters had risen well. Pain in left ear gone; its membrana tympani was paler

---

Deleau,† fitted on a solid ivory handle. It consists of a fine but strong steel needle, two inches and a half long, and the handle of an octagonal form, one and a half inch in length. The cutting or drill head is spear-shaped, one-sixth of an inch long, and one-eighth in breadth at the shoulders where the edges are turned over. The point and edges are very sharp. Each of these edges is hook-shaped, one turned forwards and the other backwards; and when thus viewed longitudinally at their broadest part, they resemble the italic letter *f*. On being brought in contact with the membrana tympani, the handle is made to rotate between the thumb and fore-finger, and this being communicated to the cutting point, it perforates the membrane similar to a drill, at the same time that the averted edges are causing a considerable loss in its substance.

In most of my operations I have used this instrument, and with every satisfaction. Its length and size enable the operator to introduce it with the utmost security along the meatus, and to place it on a defined spot on the membrane; and from the nature and breadth of its cutting edges, a sufficient extent of perforation and removal of the membrane can also be easily effected. In this latter respect, therefore, it is equal, and in the former it is much superior, to the trochar and canula of Sir Astley Cooper, or the bulky and complicated punches of Himly, Fabrizzi, and Mazzoni, or the entire instrument of Deleau; all of which take up too much space in the meatus, and most of them require both hands in their use.

---

† Description d'un Instrument pour rétablir l'Ouie. Annales de l'Industrie, tome xii. Paris, 1823.

and less turgid, and the edges of the aperture nearly in contact. Hearing distance seven inches and a half.

On the right side the membrane was only slightly reddened, and the hearing distance had become two inches. The inflamed condition of the fauces and tonsils was nearly gone, and the catarrhal symptoms had abated. The inflation of the left Eustachian tube was now easily performed; but a small proportion of the air still escaped into the meatus. On the right the muculent obstruction was still present.

Repeated the leeching, kept the blisters open, and dropped into either ear a solution of acet. plumb. gr. iv. to aq. rosæ ʒj.

July 7. Much improvement; hearing distance, left side nine inches, on right two inches. Aperture in the left membrane entirely closed, and the redness and swelling of it diminished. On the right the redness was gone, but it appeared hard and thickened.

Continued the solution, with tepid ablution of meatus night and morning.

From this till the 21st, inflation of both tympana was used every alternate day, and the blistering repeated. A gradual improvement took place in the hearing distances, but chiefly on the left side. At this latter period it had extended to fifteen inches, and on the right to four. The patient, finding himself better in his general health and hearing than he had been for some years past, left this for the country, and since then I have not seen him.

In reviewing the above case there appears to me to be some important points presented for consideration. In the first place, I may notice, that no blow or any other recent injury had been received, and consequently the case must be considered, not as an instance of traumatic hemorrhage such as that of Sir A. Cooper's, but one of a local and idiopathic form. Out of this, therefore, arises the question, What was the source of the hemorrhage? Anatomically considered, it must have been derived from one or other of three sources,—*first*, from the lining membrane of the posterior nares; *secondly*, from that of the Eustachian tube; or, *thirdly*, from that of the cavity of the tympanum and mastoid cells.

First, That it might have been derived from the posterior part of the middle and inferior meatus is possible, and especially from the turgid and congested state in which the general Schneiderian membrane was at the time; but this is scarcely the probable origin of it, even admitting the position of the head as favouring the gravitation of the fluid along the Eustachian tube. The overlapping and valvular formation of the pharyngeal opening of this tube, its length and smallness of calibre, with the surfaces of its walls being always in contact, the obverse direction of its ciliary movements, and the disadvantageous position of the

cavity at its external extremity, all preclude the probability of the blood having been thus transmitted.

As to the second and third sources of the hemorrhage, I am inclined to believe that both existed, but chiefly in the cavity of the tympanum. Here the greater proportion of the blood must have been poured out, and after filling the meshes of the mastoid cells, it found its way along the Eustachian tube into the back part of the left spongy bones, where it had become coagulated, and formed that which had been spit out in the morning. The quantity that was removed by the use of the syringe immediately after the perforation, and the bulged-out condition of the membrane at that time, indicate that the impaction of the cavity must have been very considerable. Accepting, therefore, the doctrine of Morgagni, that in passive hemorrhage there is usually no erosion, rupture, or any solution of continuity in the membrane which is its seat, I should view this case as one of idiopathic hemorrhage, confined to the fibro-mucous lining of the tympanum and Eustachian tube.

Another point worthy of notice is the time required for the regeneration of the membrane after the operation. This, in the present case, occupied about four days and a half, the operation being performed on the evening of the 2d, and the aperture being found closed on the morning of the 7th. This may be viewed as being about the average time required. In some instances I have seen it renewed as speedily as the end of the third day, and in others it was as late as the seventh; but much of this depends on the previous condition of the membrana tympani. In the above case, where the membrane was comparatively healthy and in a good condition for renewal, the time occupied may be taken as being about the average period that is required.

On the whole, it is an instructive case of the utility of a careful ocular inspection and negative exploration of the condition of the accessory organs of hearing in all cases of deafness; and though it must be confessed that in many instances of such diseases little good can be done, yet in others, and that often where there is the least prospect, there is often the greatest benefit conferred on the patient; and, from a state of mental seclusion, he is again restored to all the pleasures and advantages of society.

50, NORTHUMBERLAND STREET, *September* 7, 1844.

Cæsarian Section after the Death of the Parent. By WILLIAM CAMPBELL, M.D., Lecturer on Midwifery, and Consulting Physician to the Maternity Hospital, Edinburgh, &c. &c. &c.

MRS H., æt. thirty, a remarkably robust and muscular subject, among the industrious classes, was seized with labour in her

sixth pregnancy, on Monday, August 19, at five A. M. She was under the care of Mr Robert Menzies, one of my assistants, who, within the last fifteen months, has witnessed much obstetric practice, and has had the management of more than one hundred labour cases. I was not requested to visit this patient until Friday the 23d at one P. M., when I was informed of the duration of her labour, which was reported to be considerably advanced, also that the woman and her friends obstinately declined all interference, and that during a previous labour the professional attendants were unceremoniously ejected for attempting to afford her assistance. She had always previously, by her own efforts, given birth to very large children; and according to the report of her husband, her first infant was equal in size to many children a year old. Her countenance did not exhibit any indication of an untoward event; the pulse might be about ninety, and in other respects good; the skin was not excited; there was occasionally slight vomiting; uterine contractions recurred at distant intervals, but they were not powerful; the abdomen during their absence was free from uneasiness, as proved by firmly moving the hand over its parietes; and she partook of nourishment as if she experienced very little suffering. On examination per vaginam, a large head with its bones overlapping, and the face to the left ilium, was ascertained to have made some progress into the brim of the pelvis; but the parietal protuberances had not yet passed through this aperture. The patient and those around her were cautioned against further procrastination, and emphatically informed that she could never be relieved without assistance; to which they replied,—that as on all former occasions she had been delivered without artificial aid, they were resolved in this labour also to rely on the efforts of nature. Mr Menzies was now requested to watch her, and to report any untoward appearance. At one A. M. he informed me that some unfavourable change must have taken place, as he thought her sinking; whereupon I repaired to her house, and found that she had expired about a quarter of an hour before my arrival. It now occurred to me, but unfortunately for the first time, that if I had availed myself of the influence of one of their clergymen, as the people were of the Roman Catholic faith, the patient would have been prevailed upon to submit to the necessary practice; and there is good reason for believing, that if embryotomy had been resorted to when I was first called, the woman might have been saved.

Although I had little doubt of fœtal life being extinct, yet as the people urged the emancipation of the child, the abdominal and uterine parietes were accordingly incised, and a large male fœtus, partially decomposed, was readily removed. In dividing the abdominal parietes, the edge of the knife came very slightly in contact with the uterine surface. The abdominal cavity was

perfectly free from extravasation of any kind. On penetrating the uterus, a considerable volume of air escaped, some of the placental lobes protruded, and the nates of the child, covered with a large quantity of meconium, were exposed. The facility with which the uterine parietes were torn by the fingers—the laceration pursuing the direction of the scratch previously made by the edge of the scalpel in dividing the abdominal walls—was so remarkable that a pathologist might well be excused for doubting whether the structures under investigation were muscular; their thickness very little exceeded that of the peritoneum. After the uterine contents had been removed, the organ contracted to a considerable extent; and as, from the impatience of the attendants, a proper examination of the uterine tissues was not made, I am unable to say what injury these might have suffered during parturition. Neither can I state whether any lesion had resulted to the pelvic linings from the protracted detention of the fœtal head; but it is proper to observe, that when an examination was instituted twelve hours previously, these structures did not seem unusually sensitive.

The question naturally suggests itself—What was the cause of death? Did the patient die from exhaustion, the result of her protracted sufferings? from injury of the peritoneal coat, or deeper structures of the uterus? or were the parietes of the organ perforated at any particular point? Neither the former nor the latter supposition can be entertained; *first*, because when the patient was visited at one P. M. on the 23d, there was not the slightest evidence of exhaustion; she all along felt desire for and took substantial nourishment, such as eggs, &c.; the countenance was animated, the pulse indicated stamina; and she expressed herself, not in a subdued tone, but with resolution and firmness. I have heard some of my brethren ascribe the misfortunes of females in child-bed to exhaustion, the result of protracted uterine action; but unconnected with uterine hemorrhage, or some constitutional disease, I have yet to gain my experience in such cases. It is my firm belief, and I feel confident that those of the profession whose opportunities deserve to be appreciated will agree with me in opinion, that the deaths attributed to exhaustion might, if an investigation had been permitted, be ascribed to some serious structural lesion, as injury to the uterine tissues, or sloughing of the pelvic linings. All men who have carefully watched during parturition the operation of the unaided resources of the system, must have been struck with the length of time which, under judicious management, these have, in occasional instances, been protracted with impunity. In April 1825, Dr Hedley and Mr Butter, two of my assistants, watched during parturition an unmarried young vigorous female, who had strong pains, and whose labour, owing to the size of the fœtus, continued for fifty-two and a half hours. The child was

still-born, and the patient had an attack of emphysema after delivery; but at the end of a week her recovery was as satisfactory as if she had not suffered more than is usual during a labour of ordinary duration. Dr M'Keever, in his treatise on Laceration of the Uterus and Vagina, p. 38, gives an outline of nine cases in which the patients had been in labour from forty-eight to seventy-two hours, and all of them had a good recovery; and except one of their number, each produced a living child. Some members of the profession boastingly inform us that they have passed a long course of years in a most extensive field of obstetric practice without having ever used instruments; but I should be very glad of an opportunity by conversation to satisfy myself whether those gentlemen were capable of using instruments; and it would also be important to know the amount of mortality among their puerperal patients.

Secondly, The accumulation of air in the uterus, the absence of extravasation in the abdominal cavity, and of sanguineous effusion per vaginam, may all be considered conclusive proofs that the organ was not perforated either when the patient was visited on the 23d, or at the time of her decease.

The most legitimate inference is, that this woman fell a victim to some uterine lesion—laceration of the peritoneal covering of the organ, or of its deeper structures. It will be said, perhaps, that when she was last seen there were no symptoms to indicate that such injuries were either present or impending. It has been observed, however, and very truly, by respectable authorities on the subject, that the phenomena usually attendant on such accidents are not at all times well marked,—not those even which distinguish perforation of all the uterine tissues. Dr Douglas, p. 35, relates the particulars of a case that had been communicated to him by a brother practitioner, in which, although the uterus had been so far lacerated as to permit the fœtus to escape among the abdominal viscera, and the patient died some hours subsequent to the accident, the pulse nevertheless continued for some hours after the injury " calm and regular, and the woman complained of nothing except a pain of the left side below the ribs." Dr M'Keever acknowledges that the symptoms in every instance are not well defined, that there may be no constitutional disturbance, and that the contractions even may continue so vigorous as to accomplish the expulsion of the fœtus (p. 11). " Les signes, dans tous les cas, sont fort obscurs, et aucun ne suffit pour établir un diagnostic certain." (Duparcque, Maladies de la Matrice, tome ii. p. 35.) Dr Collins, p. 243, admits that although the symptoms which indicate rupture of the uterus and vagina are in general well marked, he has " seen a few cases where they were very obscure."

Where the injury is limited to the peritoneal coat of the uterus, or its muscular structure only is implicated, such cases

are attended by some of the more prominent symptoms of perforation of all the tissues of the organ, and the consequences are equally fatal. We may have nausea or even vomiting, a ghastly appearance of countenance, great prostration of the vital powers, an accelerated fluttering pulse, excessive abdominal pain, and restlessness ; and the uterine contractions may or may not be suspended. In a case related by Professor Davis (Obstet. Med., p. 1067), the labour pains continued ; as also in three others—one by Mr Chatto (Lond. Med. Gaz. 1832, p. 630) ; a second by Mr White (Dublin Jour. Med. and Chem. Sci. 1834, p. 325) ; and a third by Mr Partridge (Med. Chir. Trans., Lond., vol. xix. p. 72). The first example of laceration of the peritoneal coat of the uterus published in this country, will be found in the Trans. Med. Chir. Soc., vol. iii. p. 290, by Mr, now Sir Charles M. Clarke ; and as the patient died undelivered, it may be presumed that the uterine contractions ceased shortly after the occurrence of the accident. The eighty-sixth illustration, Part 1st, p. 409, by Dr Ramsbotham, is another of the foregoing cases ; but in the detail there is no mention made whether uterine action ceased after the accident or not.

I shall not at present enter into any lengthened inquiry regarding the causes which, in the cases under consideration, may produce laceration of the peritoneum. This I believe to depend, not on uterine distention, nor on blows by the fœtal limbs, as originally suggested by Sir C. M. Clarke, but on a combination of circumstances, as the conformation of the pelvis, the influence of inordinate or protracted uterine action, and the long-continued pressure between two firm structures—the fœtal head and the pelvic parietes—of the posterior and lower part of the uterus, which has in every instance except one been found injured. The cause of death after rupture of the uterine tissues is an important question. In many instances this can neither be attributed to hemorrhage nor to inflammation. The loss of blood generally is far too trivial to account for the fatal event ; and as, in the generality of cases, the patient dies in a few hours after the accident, there is not time afforded for inflammation and its consequences to prove destructive. If we reflect on the extended connexions of the uterus through the medium of its nerves, the powerful influence of its various derangements on organs which are essential to life,—that during pregnancy it is engaged in the performance of a most important function, we shall be the less surprised at the formidable effects of such injuries as involve all its tissues. The very circumstance of those lesions of the peritoneum, so apparently trivial, proving suddenly destructive to life, shows that the uterus, in consequence of gestation, undergoes some remarkable change, and that, though not a vital organ in the unimpregnated, it is decidedly so in the gravid state. Sir Charles M. Clarke's patient was in her first

labour, which commenced " at eight A. M., and at half-past ten she died undelivered.   On turning the fundus of the uterus over the pubes, the fold of the peritoneum which dips into the pelvis between the uterus and the rectum, was covered by about an ounce of blood, and there were between forty and fifty transverse lacerations, none of which were in *depth above the twentieth part of an inch*, and many of them were *merely fissures* in the membrane itself.   They varied from a quarter to two inches in length."   Dr Davis' patient " died three and a half hours after delivery ; and when the accident happened she felt, to use her own expression, *as if struck with instant death*.   In the abdomen a quantity of dark, grumous, thickish fluid was found, and upon the posterior wall of the uterus several fissures, one about two inches in length, which scarcely penetrated the twelfth of an inch through the peritoneal tunic into the muscular substance of the uterus."   The patient, whose case is related by Dr Ramsbotham, sen., gradually sank from the time of delivery after a tedious labour ; a considerable quantity of blood and bloody fluid was found in the abdomen, and a laceration of several inches in length in the peritoneum covering the posterior surface of the uterus, but the fleshy structure of the organ was not implicated. Of a similar nature is Mr Chatto's case ; the patient died six hours after delivery.   Mr White's patient died in less than three quarters of an hour after the birth of the child ; but in this case it was on the anterior surface of the uterus that the peritoneum was torn.   Mr Partridge's patient died in less than two hours after bearing twins ; about forty ounces of thin dark-coloured blood was found in the abdomen, and a number of transverse, somewhat curved lacerations—some of them resembling fissures from half an inch to two inches in length—in the peritoneum, covering the posterior surface of the uterus.

Though the case which precedes the foregoing observations scarcely admits of any remarks regarding the Cæsarian section, there are one or two, however, which I cannot omit to offer here ; because, though the points to which they refer are at first sight trivial, they are nevertheless of great importance.   I allude to the mode of emancipating the fœtus after the uterine incision has been made, and the propriety of puncturing the membranes of the ovum previous to the operation, that our success might not be frustrated by the liquor amnii flowing into the abdominal cavity.   Smellie's directions on the subject are exceedingly vague ; he does not state whether the fœtus should be removed by the head or the feet ; but all the systematic writers since his time, as Denman, Baudelocque, Burns, Gardien, Capuron, Maygrier, Davis, and Ramsbotham, state distinctly, that after a breach has been made into the uterus, the fœtus is to be removed by the feet.   Mr Bell, though ever alive to the improvement of his profession, and unquestionably one of the greatest surgeons

of his day, in a case in which he operated, and where the late Mr Renton, whose dexterity he highly praised, acted under his directions, the fœtus was emancipated by the pelvic limbs (Med. Chir. Trans, vol. iv. p. 353). Velpeau, p. 852, expresses himself in the following vague manner : " Quand il se presente par la tête ou le siége, on l'entraîne dans cette position. . .· . . s'il est autrement placé, on va le saisir par les pieds." If, instead of permitting the liquor amnii to escape by puncturing the membranes of the ovum per vaginam, before the Cæsarian operation is commenced, as many authorities recommend, the waters are on the contrary preserved until after the uterine incision is completed, this, by preventing the uterus from contracting, would certainly facilitate the subsequent removal of the fœtus, and in doing so it would, under these circumstances, be immaterial whether the pelvic or cephalic extremity were extracted first. But if the liquor amnii is discharged before the operation is commenced, I am satisfied that, in some instances at least, an attempt to remove the fœtus by the feet will, as regards it, have disastrous results. For, as is satisfactorily shown by the following quotation, the uterus, during the extraction of the fœtus by the feet, may contract upon its head and neck, while the placenta may be detached at the same time, whereby both sources of fœtal existence are simultaneously cut off. " The child was seized by one thigh, and the body was extracted with the greatest ease, until the shoulders came to pass, when the uterus suddenly and powerfully contracted, and grasped the child's neck and left arm so strongly that it could not be liberated, although great force was used in extraction. The hand was then gradually passed along the body of the child into the uterus, and the stricture being dilated the extraction was accomplished. It would have been easier," continues the writer, " to have torn away the uterus from its connexions than to have disengaged the child by direct extractive force. The fundus and body of the uterus felt very hard. The child was vigorously alive when first taken hold of ; but from the length of time occupied in extracting the head it became so enfeebled as to show only slight signs of life. Every means were diligently employed to resuscitate it, and persevered in for three quarters of an hour, but without success. This was a most appalling affair. After dividing the funis, the placental extremity was firmly held with one hand, while the other was introduced into the cavity of the uterus for the purpose of removing the placenta, *which was already detached and lying loose*. The uterus then immediately fully contracted."—Edin. Med. and Surg. Journal, No. 146. In the foregoing case the membranes had burst some time before the operation was performed.

In a conversation which I recently had with Dr Radford of Manchester, who may be considered a high authority

in midwifery, he informed me that, in a case in which he operated by Cæsarian section within the last two years, and which has not yet been published, *there* also, considerable difficulty had been experienced in extracting the head, but that fortunately the fœtus had been dead some time previously to the operation. A similar disposition, though not to the same extent, was manifested by the uterus in a case operated on at Paris by Professor Paul Dubois, and detailed in the Gazette des Hôpitaux, Samedi, 23 Juin 1842. The reporter of the case, in speaking of the extraction of the fœtus, observes, "L'enfant fut extrait avec facilité en le soulevant par les aines; on eprouva seulement un peu de difficulté pour extraire la tête par suite du retour de la matrice sur elle-même. On a avancé que ce retrait de l'uterus était tel qu'il dévenait quelquefois necessaire de récourir au forceps pour extraire l'enfant. . . . Au moment où les membranes ont été percées, il est sorti un flot de liquide qui, grâce à la pression qu'un aid exerçait sur les parois laterales de l'abdomen, et aux contractions naturelles de l'uterus, s'épancha en entier en dehors sans qu'il pénétrât dans la cavité abdominale." This last case proves, *first*, that by preserving the liquor amnii until the uterine incision has been completed, the fœtus will thereafter be more easily emancipated; and, *secondly*, that by applying pressure to the abdominal parietes and bringing them into contact with the uterus previously to puncturing the membranes of the ovum, the waters may be prevented flowing among the abdominal viscera,—the only reason, I believe, for recommending the waters to be permitted to escape antecedently to the operation.

EDINBURGH, 4 PICARDY PLACE,
September 12, 1844.

Notice of a Case of alleged Luminous Appearance on the Hand and other Parts of the Body before Death, in a Letter to one of the Editors. By ALEXANDER WOOD, M. D., Fellow of the Royal College of Physicians, Lecturer on Pathology and Practice of Medicine, &c. &c.

DEAR SIR,—It is almost eight years since I received an account of the death of a person residing in one of the western counties of Scotland, accompanied with the description of " strange lights" which were seen to play round her previous to her decease. Various speculations were afloat as to the nature of this phenomenon, and while some unhesitatingly ascribed it to the effect of superstition on the imagination of the bystanders, others thought it more prudent to offer no opinion on the subject.

The story was brought again to my memory on seeing in the

London and Edinburgh Monthly Journal of Medical Science for October 1842, a review of a work by Sir Henry Marsh on "The Evolution of Light from the Human Subject," containing an account of several cases somewhat similar. Thinking it right to procure any additional information I could on this curious subject, I immediately wrote to the friends of the deceased, requesting a full account of the circumstances attending her death; and was furnished with a reply, which was the more easily obtained, as those who had seen the lights referred to had drawn up an account of it at the time, and authenticated it with their signatures.

Various circumstances have hitherto prevented me from making any use of the documents which I received in November 1842. At your request I now send you an abstract of them, without any comment whatever; for although I think it right to contribute any thing, however slight, to the scanty information existing, I have no inclination to commit myself to any opinion on the subject.

The narrative is, as might be expected under the circumstances, extremely imperfect, and the professional adviser of the patient had no opportunity of seeing the unusual occurrence. The patient in whom the lights were observed was upwards of seventy years of age. The cause of her death would appear to have been exhaustion and some chronic affection of the coats of the stomach, probably of the nature of scirrhus. The unusual appearance was witnessed by five individuals. " About eight o'clock in the evening of the 30th September 1836 (two days before her death), two persons attending her, and leaning on her bed, looked to each other and exclaimed—' What is that?' The exclamation was caused by the appearance of a pale flame about a foot in length and an inch and a half in breadth, slightly curved and pointed at the ends, moving slowly between the pillow on which one of her hands happened to be lying and the board at the head of the bed. The flame was sometimes bright and sometimes faint, and gave a pale yellow colour to the lighter part of the print hangings of the bed. At times the inside of the bed seemed lighted as by a lantern, and more than once the pillow on which her head lay, and her cap and face, became quite white. She did not seem aware of the light herself, as on one occasion when she raised her luminous hand towards her eyes, one of the attendants interposed her hand to shade her eyes from the light, when she immediately put it down. She disliked light excessively, and the room was all this time kept as dark as possible. There was a stone wall at two sides of her bed. On one occasion one of her attendants tied her cap, when the nail of the thumb became luminous; there were also dots of light observed on the pillow, face, and cap. The body presented no unusual appearance after death. The undertaker saw nothing

3 A

extraordinary, nor did it seem to decompose more rapidly than usual." Such are the facts as I have received them. The appearances seem not unlike those observed in the second case related by Sir H. Marsh; but I beg that I may be regarded merely as the vehicle of their transmission to you, and not in any other way responsible for them.

EDINBURGH, *September* 12, 1844.

Surgical Cases — Neuralgia of Stump after Amputation— Secondary Amputation—Return of the Neuralgia. By JAMES DUNCAN, M.D., Fellow of the Royal Colleges of Surgeons of England and Edinburgh, one of the Surgeons to the Royal Infirmary, Edinburgh.

J. R., æt. forty-five, an Irishman, was admitted into the Royal Infirmary, under my care, on August 30, 1843.

He had been employed on the Edinburgh and Glasgow Railway, and in August 1840 one of the carriages passed over the limb, tearing it off immediately above the ankle, and otherwise injuring it severely. The extremity had in consequence been amputated by Dr Hamilton of Falkirk a little below the knee-joint. The case had gone on remarkably well until about six weeks after the operation, when the stump became the seat of slight neuralgic pains. These continued to increase, notwithstanding a variety of medical treatment, and at last they became such a source of annoyance and distress to him, that he was obliged to abandon the situation on the railway, to which he had returned some time after the operation.

When admitted under my care, the pain was described by him as being exceedingly severe, more particularly during the night, and such as almost altogether to banish sleep. There was not the slightest reason to believe that the patient feigned; his employment was by no means an arduous one, he had a family depending upon him for support, and, above all, his appearance was that of a person worn out by continued suffering.

When admitted, the stump was carefully examined, under the belief that the pains might depend upon the divided ends of the nerves being either injuriously involved in the cicatrix, or applied over the ends of the bones. Nothing of this kind, however, could be discovered, no enlargements of the extremities of the nerves could be made out, and altogether the stump was as well formed and apparently as serviceable a one as could be met with. In addition, the pain was not confined to any particular spot, but affected the whole stump below the knee, very slight pressure on any point producing very acute pain.

As his general health appeared to be much disordered, it was thought possible that by improving this the painful affection might be relieved. A slight alterative course of the blue pill was accordingly exhibited, with the effect of somewhat improving his general condition, but without any the slightest amelioration of the local symptoms. This was followed up by the internal exhibition of tonics, and the other remedies occasionally found useful in such cases ; amongst these may be named the Quinine, Carb. Ferri., Arsenic, &c., but all without effect.

Local remedies of different kinds were likewise tried. At first, as there appeared to be some slight fulness with increased heat of the parts below the knee-joint, leeches in considerable numbers were applied, and these were followed by a succession of blisters to the part. For a time the blisters appeared to act beneficially, the pain being relieved, although by no means removed, for a day or two after their application, as long as the discharge produced by them continued. Even this slight temporary relief, however, speedily ceased to follow their employment. The painting over the parts with a strong Tinct. of Iodine was next tried, and likewise with temporary relief, and that of longer duration than followed the use of the blisters. This application also soon failed to have any effect, and various anodyne remedies were next tried, but without their having the slightest influence.

On the whole, the severity of the symptoms continued to increase, and the tenderness became so excessive that even the drawing of a feather over the surface of the stump made the patient shrink. His appearance became more haggard, the expression of his face more anxious, his appetite became more and more impaired, he was worn out by want of sleep, and he became much emaciated.

From the time of his admission into the hospital, the patient had been incessantly urging me to remove the stump, a request which I was exceedingly unwilling to comply with, inasmuch as I did not believe the operation would be followed by any benefit at all proportioned to the risk incurred.

When, however, all the means I could think of had been tried, I was reluctantly compelled to think of having recourse to this step ; and as the patient himself was more and more urgent, it was determined, after a consultation with my colleagues, to give him the chance afforded by amputation higher up. I explained to the patient the risk he incurred by the operation, and likewise the possibility if not the probability of the pain returning in the new stump. He was, however, determined on having the amputation performed, and stated his resolution, if we refused to comply with his wish, to leave the hospital, and find some surgeon who would.

Amputation above the knee was accordingly performed on November 16. The patient endured it manfully, and when carried to

bed, expressed himself as delighted with the relief afforded. The parts removed were carefully examined. The articulation was anchylosed, and free from any existing disease. The extremities of the nerves were thickly imbedded in soft parts, and the enlargements, almost invariably found after amputation, existed to even a less extent than is usually the case.

Every thing went on favourably for a time after the operation. The stump healed with great rapidity, and for some ten weeks the patient remained perfectly free from pain; he was in high spirits, his appetite exceedingly good, and his appearance was that of a person in robust health. The patient himself chuckled at the idea of having known better than the doctors what treatment was necessary in his own case, and we were beginning to think that a permanent cure had in reality been effected. About the tenth or eleventh week, however, the patient began to complain of some slight pain in the stump, but was exceedingly unwilling to believe that it at all resembled that under which he had previously laboured; indeed, it was not until the lapse of ten days or more, when it at last became too severe any longer to flatter himself that it was not, that he would admit it. The same treatment as formerly was again tried, and with much the same result, the blisters perhaps affording more relief than before. In addition, blistering the spine was tried, but without the slightest effect. The tincture of Aconite was likewise given internally in doses of g^{tts}. v., three times daily, and certainly for a time with very marked benefit; but the effects produced by it on his general health, even in diminished doses, were so injurious, that we were obliged to discontinue it. We next tried its local application, and likewise with benefit to the local affection; but it still exerted the same prejudicial effect upon the general health, again obliging us to abandon its use. In consequence of the relief afforded by the discharge produced by the blisters, I was induced to try the effect of a seton, and one was accordingly passed through the anterior part of the stump. After this had produced pretty free suppuration, the pain began to abate, and the patient remained for about a fortnight much freer from it than he had been under any other form of treatment. This, however, likewise began to lose its influence; and finally, as it appeared altogether to have lost it, it was removed by the patient himself.

The patient is now in very much the same state, in so far as the neuralgia of the stump is concerned, as when he entered the hospital, but certainly not suffering so severely from the pain as immediately before the performance of the operation, although I have reason to fear that in time he may.

I should have mentioned that the pain at present does not involve the whole surface of the stump as formerly, it being confined in a great measure to its outer and posterior part, and

likewise, that it is produced by pressure over the whole extent of the sciatic nerve, the muscles at the same time being thrown into violent spasmodic action.

Cases of irritable stump are fortunately not of very common occurrence, and are perhaps not so frequently met with as formerly, a circumstance which has been attributed to the improvements which the operation of amputation has undergone in modern times. They are mentioned by Mr Liston as being more frequently met with after amputations of the forearm and arm than any other; this may be correct, but I have myself seen them more frequently perhaps in amputations below the knee. The pain in different cases varies in extent; it may involve the whole circumference of the stump, it may affect only a particular spot over the extremity of the nerve, or it may extend, as in the case I have related, along its whole course. The period after the operation at which the pain may occur varies much. Thus in the man Rice it commenced about six weeks afterwards; in a man upon whom Mr Mayo had operated, it began about eighteen months after the amputation; and in another, whose leg had been removed by Sir B. Brodie, it did not make its appearance until after the lapse of seven years.

In some cases the irritability of the stump may depend upon merely local causes, but in others again there would appear to be, as has been said, a constitutional and innate tendency giving rise to it. The extremity of every nerve after amputation swells into a bulb of greater or less size, which possesses considerable firmness, being sometimes almost cartilaginous in its structure. It was at one time thought that the mere existence of these bulbous swellings was sufficient to account for the occurrence of the pain; this, however, is far from being the case, as we not unfrequently find these tumours of very large size in stumps which had never been the seat of uneasy sensations; and on the other hand, they are sometimes comparatively small, in cases in which, as in the present case, great irritability had existed. Should these swellings, however, be involved in the cicatrix near the surface, or by its contraction, as suggested by Mr Laurence, be pressed against the sawn end of the bone, then irritability of the stump is extremely likely to follow. These conditions of the nerve, with perhaps, in some cases, a degree of chronic inflammation of its proper tissues, or its neurilemma, are, it is generally allowed I believe, the most frequent causes of those cases of irritability of the stump which are local in their origin, and are the only ones, I would say, which can be permanently relieved, either by a secondary amputation, or by excision of the extremity of the nerve, these being the operations recommended in such cases. The latter operation is of course to be preferred in those cases in which the symptoms are " clearly

374 SURGICAL CASES.

attributable to an affection of one nerve only. That in certain cases the pain is dependent upon purely local causes, is fully established by the complete and permanent relief which has followed either the one or other of these operations, although, it must be allowed, in some of the recorded cases it would have been well had they been watched for a longer period than they appear to have been. There is no limit, we have seen, to the time after which the pain may occur after a primary amputation, and as little is there after the secondary operation. In the case I have recorded, for instance, the patient might have been dismissed the hospital, and regarded as cured, had I not, from a suspicion I entertained as to the ultimate result, detained the man much longer than was required by the existing state of matters; no return of the pain having taken place until after an interval of ten weeks.

The cases which are to be included under the second head, those which are not dependent upon merely local causes, are fortunately comparatively rare; still, however, they are occasionally met with, and many of a very distressing character have been recorded. In these we have nothing in the formation of the stump to account for the occurrence of the pain; bulbous swellings, it is true, may exist on the ends of the nerves, but we have seen that the mere presence of these has nothing in itself to do with the existence of the pain; and in the cases which I would include under this head, there has been nothing in their condition to account for it, and, above all, the result of the treatment has shown that the symptoms did not depend upon merely local causes. In the case of Rice, the enlargements were smaller than usual, not implicated in the cicatrix, and not subjected to injurious pressure against the end of the bone. In the two following cases, as related by Mr Mayo, there was likewise no local cause to account for the occurrence of the pain. This first case, we may remark, affords us an instructive lesson as to the impropriety of having recourse to amputation in cases of neuralgia of a joint.

" H. A., ætat. twenty-two, the catamenia regular, having suffered during four years pain in the knee-joint, which, although sometimes greatly mitigated, never entirely left her, at length, when every remedy that could be thought of had been tried, and the pain had much increased, underwent amputation of the leg. The symptoms had been pain and increased sensibility, and nothing more; the joint, with the exception of slight œdema arising perhaps from the local remedies, had not swollen, nor had there been any mechanical impediment to motion. On examining the amputated knee, which had been previously injected, the capsular synovial membrane was found of a bright red. The synovial membrane covering a small part of the semilunar cartilages was likewise very vascular. At the upper part of the patella, the same appearance was seen; towards the lower part, the synovial membrane, for the extent of five lines by two, was not only red with injected vessels, but considerably thickened.

" These appearances admit of being interpreted in two ways. The in-

creased capillary vascularity of the joint may have been either the cause of the pain this patient suffered, or an effect of it. I am inclined to adopt the latter supposition. It is certain that influences upon the nerves are capable of producing, not pain alone, but even swelling about a joint : it is thus that, in hip disease, the knee often becomes affected with symptomatic swelling, in conjunction with pain and tenderness. The further progress of the present case seemed to show that the disease had been in the nerves, not in the organization of the joint. Soon after the stump had healed, it was accidentally struck. To this cause, probably without reason, the patient attributed a return of pain exactly similar to that which she experienced before the amputation of the leg. When the pain had gone on several months increasing in severity, the patient, anxious at any expense of immediate suffering to get well, submitted to another operation. The pain and tenderness were seated in the last three inches of the stump, not more upon one aspect than another, although most acute as it seemed in the part of the cicatrix covering the bone. The extremity of the stump was therefore amputated, a second portion of bone sawn off, an additional portion of the sciatic nerve taken off in the operation, and the bone and nerve buried in a full bed of relaxed muscle and integument. On examining the part removed, the sciatic and the saphenus nerves were found to terminate in large white cartilaginous bulbs, behind but not adhering to the cicatrix. It is distressing to have to relate, that, on the stump healing, the pain recurred. After some months, the pain continuing, the sciatic nerve was divided under the edge of the glutæus muscle. Again, that is, while the wound was green, her sufferings were mitigated ; on its healing, they have recurred. It is needless to say that every remedy, local and general, upon every plan, and the intermission of all remedies, were tried, before the repeated operations were resorted to."

" A man, about thirty-five years of age, was admitted into the Middlesex Hospital in the course of the last autumn, whose leg I had amputated below the knee, for compound fracture, about two years before. It was, to the best of my recollection, half a year before the readmission of this patient that the stump began to be painful. The pain was described as a constant and severe gnawing pain : it was principally felt at the end of the fibula, from whence it extended to the knee and ham. The cicatrix covering the end of the fibula was exquisitely sensible, and the muscles of the stump were in a state of perpetual quivering : the cicatrix appeared to grin, from the successive traction of different packets of the muscles. Supposing the symptoms to depend upon an enlargement of the end of the superficial peroneal nerve, I cut down to the fibula, and removed about the half of a square inch of integument and cicatrix covering it, with half an inch of the fibula, and some thickness of the flesh attached to it, including the superficial fibular nerve. The end of this nerve was found to terminate in a small bulb behind the cicatrix.

" The severe pain which the patient had suffered for months was instantaneously removed by this operation. While the wound was healing, however, some pain and tenderness reappeared in the direction of the fibular nerve : but on applying leeches, and administering calomel every night for a week, these symptoms went away, and the patient left the hospital almost free from pain in the stump ; but a little of the quivering remained, with slight tenderness of the original cicatrix opposite to the situation of the tibial nerve."

In the first of these cases, it is perfectly evident that the symptoms did not depend upon merely local causes; but if any room for doubt remained after the primary amputation, this was completely removed by the issue of the secondary one, and the precautions taken in the latter. The second case, it appears to me, was likewise one of the same description, the whole history leaving no doubt upon the matter.

The period after which, in cases of this kind, the irritability may supervene, appears to vary much, as I have said, both after the primary and secondary operations. Most generally, however, after the secondary amputation, it commences either when the healing process is nearly completed, or at least within a short time afterwards, the patient in the interval, generally speaking, remaining free from uneasiness. In the present state of our knowledge, it would be useless to speculate upon the causes of this irritability. By some the cases are regarded as very analogous to those of spinal irritation, and certainly, in one case related by Mayo, he mentions that he thought he detected some tenderness at one part of the spine; however, treatment applied to this part appeared to exert no influence whatever over the disease. In Rice nothing of this kind could be discovered. In most cases the symptoms appear to be intimately connected with some derangement of the general state of the health, but whether as a cause or effect it is often difficult to say.

The treatment in the first class of cases is obvious, and has already been alluded to : it consists, as I have said, either in performing a secondary amputation, or in excising the bulbous extremities of the nerves. . The success of the treatment in these cases has been well established. The same cannot be said of any treatment whatever in the latter class of cases, as all the remedies which have been employed in different cases, although in the first instance several of them have appeared to afford considerable relief, have after a short time become equally powerless. The greater number of the remedies generally employed in these cases were tried in this one, but all without permanent benefit following their use.

As to the propriety of secondary amputation in these cases, there can be no difference of opinion, when the surgeon is convinced that the symptoms depend upon constitutional causes ; and in this case I would never have had recourse to this step, had the possibility of their depending upon local causes been altogether beyond doubt. After all the remedies employed had completely failed, I did, after considerable hesitation, decide upon giving the patient the chance afforded by amputation ; but now that the nature of the case has been, as I believe, completely decided by the issue, nothing would induce me a second time to have recourse to it, although the patient himself now strongly urges it, and is more than willing to run the risk of a

third amputation. In almost every case, relief for a longer or shorter period has been afforded by the operation; but then we have seen that it is but of short duration, and not at all proportioned to the risk run. Mr Mayo, however, I find from the report of the case already referred to as operated upon by him, is not very strongly opposed even to a third or fourth operation, and the following are his reasons :—

" I suppose it to be possible that, in this case, the seat of irritation may be confined to the trunks of the nerves in the limb, and that their origins may not be engaged. If it were so, amputation at the hip-joint might cure this patient. But I am loth to recommend this formidable operation, as it might prove as useless as those which have been already sustained. My reason for conjecturing the seat of the irritation may possibly not extend beyond what remains of the limb, is the following case.

" I had about three months ago under my care, as an out-patient of the Middlesex Hospital, a woman whose arm Mr Bransby Cooper had amputated at the shoulder-joint for neuralgia, which had followed an amputation above the wrist, and had returned after a second amputation above the elbow. She told me that she was perfectly cured, by the third operation, of the pain she had undergone so much to get rid of."

PART II.—REVIEWS.

1. *Homœopathy Unmasked, being an Exposure of its Principal Absurdities and Contradictions: with an Estimate of its Recorded Cures.* By ALEXANDER WOOD, M.D., F.R.C.P., &c. &c.
2. *Defence of Hahnemann and his Doctrines: including an Exposure of* Dr ALEXANDER WOOD's " *Homœopathy Unmasked.*"
3. *Sequel to Homœopathy Unmasked; being a farther Exposure of Hahnemann and his Doctrines, in a Reply to recent Anonymous Pamphleteers.* By ALEXANDER WOOD, M.D., &c. &c.
4. *A Medical Visit to Gräfenberg in April and May* 1843, *for the Purpose of Investigating the Merits of the Water-Cure Treatment.* By Sir CHARLES SCUDAMORE, M.D., F.R.S., &c.

THE subjects on which the popular mind is exposed to delusion become, with the spread of knowledge, progressively circumscribed. The time was when the best informed of an age found it easy to believe that the incidents of a man's life or the events in the chronicles of a people were determined by the course of the stars; nay even, though not probably without an occasional struggle of doubt, that the future is prefigured in the direction of a thunder-clap, in a shower of stones from the air, in the flight of a bird, or in some trivial peculiarity of an animal's entrails. And not only by such observations that the future could be anticipated, but even subjected to the will of man, by means which, in comparison with the alleged effects, show a

disparity like that which exists between the modern homœopathic infini-
tesimals of drugs and the known power of resistance in the living frame
to external agents, for example, that the moon could be drawn from her
orb by the help of a fragment of some insignificant herb,—

<center>Te quoque, Luna, traho.————</center>

These, and an infinite number besides of long-cherished follies, have
mouldered away before the growth of knowledge—before the diffusion
abroad of a slight smattering of the laws to which the course of nature is
obedient. The average amount of information in such a subject as as-
tronomy, meteorology, natural history, or anatomy, which falls to the
share of each individual, even among the educated orders of society, is
trifling in the extreme. Yet that trifling allowance avails to beget a
spirit which, by reflection from mind to mind, gathers, in all but the
weakest within the sphere of its influence, a force to resist the fascinations
of those delusions to which the strongest minds among our remoter pre-
decessors fell an easy prey. In short, the past history of the objects of
man's belief unequivocally shows that it is not depth of penetration, refine-
ment of reasoning, or unwearied reflection, but a spirit readily springing
from knowledge, by which he is emancipated from a slavery to the grossest
errors. Nay, these high qualities of mind, in the absence of a firm basis of
knowledge, are too often observed to lead men's minds farther astray.

Of the delusions in question there are two principal sources often
blended together. Thus, man's ardent curiosity to discover new sources
of relation among the events or objects coming within his view, leads him
to invent imaginary bonds of relation when he cannot reach the truth.
And his facility of belief on all subjects of the true nature of which he is
ignorant, makes him ever ready to listen to pretended discoveries, and to
become the dupe of interested parties, if they take but very small pains to
suit their inventions to the taste which prevails with him at the moment.
On such occasions he believes what is affirmed, not merely because by the
constitution of his mind he feels dissatisfied till he has discovered some
kind of relation among the objects of his perceptions in general, but be-
cause he cannot help believing whatever is affirmed strongly, unless he has
learned to distrust the individual who affirms, or unless what is affirmed be
incompatible with some part of his previous knowledge or persuasions. So
long, then, as there were numerous sets of events and objects, the true links
of relation among which were undiscovered, there being always designing
persons on the watch to turn the present current of popular feeling to their
own advantage, men were kept in fast bondage to such delusions as those of
astrology, divination, sorcery, and magic ; and the same bondage would
have remained unbroken for a much longer period, did it not fortunately
happen that the light which springs from knowledge sheds its lustre far
beyond the ranks within which exact knowledge is confined.

Man is so much of an imitative animal, that he catches up his neighbour's
spirit, even on points that he understands but imperfectly. Or the sym-
pathy between mind and mind, through imperceptible links, is not confined
to such cases as the rapid propagation of panic terror over a crowd of
people. There are also slower influences by which one intelligence acts
upon another, so that, without direct instruction, numbers are already pre-
pared to apprehend at once the scope of a new subject of study before ap-
plying themselves to it, and to become imbued with its spirit, provided the
society in which they live includes a certain proportion whose minds have

been already operated on by the sentiments, precepts, or principles on which that study is based. And the converse of this is true—that when a kind of knowledge at all complex is successfully cultivated by a small proportion of persons, or when such a subject comes to engage attention in a society, among few of the members of which it was till then received, its progress among them is inconceivably slow, and beset with obstacles at every step.

It would be easy, did the time permit, to illustrate this subject with copious examples, and to point out the momentous bearings of this general fact on all the efforts made to promote the mental improvement of bodies of men.

And those who have been accustomed to contemplate the prodigious effects of this principle, when happily it has come to operate in a right direction, and to view it as the strongest motive to perseverance, amidst the deepest discouragements, in any well-considered plan to extend the culture of the higher mental susceptibilities, cannot but be struck with any instance of its apparent failure under circumstances where they should have expected to see it manifest its fullest force.

The works at the head of this article point to the department in which, up to this time, there has been, to all appearance, a remarkable tardiness in the display of the effects of this principle. Quackery in diseases maintains its empire even in this enlightened age. Though hardly less of a delusion than astrology or divination, it holds up its head among the educated orders of the community. This surprises us when we advert to the great multiplication of sound medical practitioners, men of education and intelligence, who live on terms of the strictest intimacy with patients of all ranks, and thereby, it might be supposed, according to the view just enunciated, should be exactly in the situation to influence favourably the public mind for the ready apprehension and reception of medical truth.

To what cause, then, does quackery owe its continued existence in our age, notwithstanding these circumstances so propitious to popular instruction? If it be, as we truly believe, a delusion analogous to the obsolete infatuations of former times—astrology, divination, and sorcery—it must be owing to a continued slowness in the capacity of the popular mind to apprehend the just spirit of medicine,—to appreciate the real nature of disease,—and to catch up the limits within which remedies must operate. When the subject is duly considered, no alternative presents itself. And the less room exists for surprise when there is taken into account the extreme difficulty of understanding the true nature of medicine, and the assigned limits of its power over diseases, and at the same time, the prolific nature of quackery viewed in the abstract, which, hydra-like, still reappears, though without ceasing struck down, while at each reappearance it puts on some new, more secret, or yet unrecognised form of disguise. In short, whatever relates to diseases and remedies rests on the laws of life, the most embarrassing of all the subjects of man's studies. It is not wonderful, therefore, that the popular mind should be a great deal more tardy to imbibe the genuine spirit of the course of living action, than to catch up the simple light of physical nature. Or the state of the case at present is exactly what might have been foretold some ages ago. Thus, as men are no longer so little acquainted with physical nature that they can be duped on the subject of the stars, meteoric phenomena, or the like, the more ambitious Sidrophels of the day feel compelled to exercise their tactics on what topics are still sparingly understood, and to impart to their systems of quackery, in compliance with

the requisition of the age, some appearance in the distance of a Baconian hue—something representing to the inexperienced eye the colour of inductive science.

And we may rest assured that quackery will not cease to prosper under some one of its many disguises, as long as men in general remain so little acquainted with medicine, and, we may add, with the medical profession. We say with the medical profession ; for, after each defeat, quackery succeeds in recovering its ground in no small measure, because the public inconsiderately impute to the medical profession as a body all the follies, weaknesses, and inconsistencies discoverable in individuals within its circle, which belong to them, not in virtue of their medical character, but as weak or wrong-headed persons among their fellow-men.

As this subject so intimately concerns the public, and as we wish to throw out some hints of a very general nature for the purpose of putting people on their guard against the cunning devices of quackery, we beg permission of our medical readers to speak throughout the rest of this article in such terms as the public can understand.

Disease is a part of the inheritance of our human nature. The structure of our living frame, and the ever-varying outward circumstances under which we are placed, render diseases not less inevitable than ordinary bodily accidents. And when diseases have arisen, they must, for reasons not less intelligible than in the case of accidents, prove fatal in many instances. In short, at variance with the flattering insinuations of quackery, the human race is indisputably so circumstanced that numbers must be cut off by diseases before the period for the death of age arrives.

The parallel between external injuries and internal diseases is in many respects much more close than it appears to be at first sight—nay more perfect than, for reasons of temporary influence in the progress of medicine, it is allowed to be by some medical authorities of distinguished name. This we remark here, because we have observed that sounder sentiments prevail in the public mind, in regard to the healing of wounds and other injuries, than as respects the recovery from internal diseases. We regard not merely the medical profession but the public nearly at large as now fully impressed with the great truth on which the whole of the modern surgery of injuries is based, namely, that the repair of a breach depends, not on the applications made by the surgeon, but on the spontaneous exertion of healing powers inherent in the living system. Moreover, that these powers are liable to interruption, retardation, or total failure, from the ever-changing circumstances of previous health and present external agencies. That the duty of the surgeon, embarrassing as that sometimes is, limits itself to placing the patient under those conditions, whether of a positive or negative kind, which have been found by the experience of past times most conducive to the free exercise of the healing powers inherent in the system. In regard to internal diseases, when curable, it is not to be doubted that recovery is in a great measure owing to the operation of analogous powers, though, on account of the extravagant ideas respecting these embodied in some obsolete theories, pathologists are at present, with reason, jealous of much reference to a " vis medicatrix naturæ."

But the disposition in the living body, through its own inherent susceptibilities, to a revolution from the state of acute disease to a state of health, cannot be disputed for a moment, though, at least in civilized life, the susceptibilities called into operation often require direction or moderation to prevent their excess from producing new mischiefs. And in chronic

diseases, the chief groundwork of sound treatment is to remove sources of irritation, to husband and promote the vigour of life, so as to give free scope to the sanative efforts of nature.

In short, the same power or aggregate of powers resident in the living body, by which it is developed from an invisible germ, maintained in its mature state, and finally carried through the process of decay, has also the office, within assigned limits, of rectifying the faults to which its intricate machinery is liable, whether these be discoverable in its visible fabric or inferred from derangement of action.

It appears, then, that it is quite correct to represent the body, within itself, as provided with a power, not only to repair injuries, but also to recover itself from curable diseases, which power or powers in no respect originate from any arts of medicine or of quackery, being subject merely to modification, whether for good or for evil, under the influence of either; and that the use of treatment is merely to afford free scope to this natural tendency to recovery, whether from injury or disease, or to relieve the living frame from such embarrassments as may interfere with its sanative efforts. Quackery pays allegiance to no such power. It professes to coerce nature,—to expel the disease by the overpowering force of a nostrum. And since the natural disposition to recovery under favourable circumstances seldom enters into popular views of the cure of diseases, it too often succeeds in persuading the world that, without such a nostrum, recovery would not have taken place. On the contrary, the sound-minded regular practitioner acknowledges this sanative disposition as the sole power through which his remedies can operate. All his prescriptions, whether for internal or external use, are directed towards the removal of whatever present obstacles may interpose between the disease and the free exercise of this power; in which is included the separation of parts past recovery, when that is practicable. He is "naturæ minister," the servant of nature.

If there be any method of making it clear, whether the right method of cure in diseases belong to quackery or to regular medicine, it must be the consideration of what is the true nature of disease. In the popular illustration of such a subject there is much difficulty; yet we think that a few slight notices of some prominent groups of maladies will avail to show how inadequate quackery is to the efficient treatment of diseases.

Among the simplest of all morbid states are the effects of poisons. These effects consist of a series of actions and reactions, which sometimes cease with the evacuation or neutralization of the noxious substance, when that is immediate, or else, owing to the production in the mean time of less transitory alterations, become perpetuated after its direct operation has ceased. And this secondary operation of the poisonous agent goes on either till death take place, for example by exhaustion, or under more favourable circumstances, till the state of health is renewed by the self-healing power of nature. For some poisons there are antidotes, or chemical substances which, if swallowed quickly, neutralize the hurtful effects of the poison. But there is no universal antidote, like what quackery often boasts of. There is, in a word, no philosopher's stone either against poisons or against diseases in general. Where an antidote exists, for the most part it is proper to one poison; in rare cases one antidote counteracts several poisons.

A review of the effects of poisons affords a parallel to all those apparent uncertainties and anomalies which give so much intricacy to the history

of diseases in general, or rather we should say to whatever concerns organic nature as contrasted with the simplicity of physical nature. Thus, to confine ourselves to the effects of a single poison. One patient dies from a small quantity, another escapes from a large quantity ; one recovers without treatment, another dies from no greater quantity, in defiance of the most careful treatment ; one dies in a few hours, another not for several days ; one recovers after a few hours' suffering, another not till after many days or even till after weeks or months of illness.

Inextricable as the difficulty here presented seems to be, it is nothing greater than what occurs almost uniformly in the examination of the course of diseases and the effects of remedies. And so discouraging a prospect does it offer to some minds, as to hurry them in disgust into a scepticism as to the usefulness of medicine. But it is to be remembered, that there was a time when the occurrences of physical nature presented a confusion hardly less inextricable ; nor was it in such a temper of mind that the order and symmetry of the material universe was made to dawn on mankind.

All the above differences of effect undoubtedly acknowledge a corresponding difference in the operation of the cause. And this proposition, not less indisputable than that every occurrence in physical nature has a cause, at once forces out the inference, that the power to produce determinate effects on the living body in individual instances, as in the example of applying remedies to cure a case of disease, is not to be obtained by generalities such as quackery deals in, but only by the greatest possible attention to all the particulars within one's reach, as respects the patient, the disease, and the remedy, the precepts for the attainment of which make up the chief part of regular practical medicine.

Accordingly, it sometimes happens that when there is access to the particular details of a series of cases, like those of poisoning just instanced, a good deal, and occasionally the whole, of the apparent contradictions disappear, because variations in the minuter and less obvious circumstances are brought to light, such as in the examples referred to would be, the state of the stomach as full or empty, the kind of food with which the poison was taken, the previous health, the tendency in the individual to vomit, and the like. Again, notwithstanding the ill success of regular treatment in some examples of poisoning, and the recovery without treatment in others, it will be found that, out of a given number of cases, the bulk of the recoveries are those in which early and judicious treatment was resorted to. And this is exactly parallel to the statistics of diseases in general, in the hands of regular practitioners, when computed over the community at large, and not according to some exclusive plan, contrary to what is asserted by mountebank pretenders and wrong-headed people, whether in or out of the profession.

Besides poisons strictly so called, there is an order of noxious agents, the effects of which are familiar to the public, namely, the poisonous causes of small-pox, measles, and scarlet fever. From the brief consideration of these, in two or three respects, we think may be drawn some intelligible illustrations of the soundness of the views adopted in regular medicine regarding the nature and treatment of diseases.

The subtile causes of small-pox, measles, and scarlet fever, produce severally very definite trains of symptoms. Or the poison in each of those diseases gives birth to a succession of actions and reactions of nearly uniform duration in every individual attacked. And the train of actions and

reactions constituting each of those diseases tends to terminate in health. And when any one of them fails so to terminate, the fatal event must be owing to an exhaustion of the self-healing power under the complexity of the efforts required of it, when circumstances, whether applied from without or originating within the body have not been propitious. That is to say, diseases of this kind destroy life owing to the coincidence of unfavourable circumstances with the operation of the poison from which each originates.

Death takes place when any one of these subtile poisons acts on a constitution before deranged or tending to become unusually deranged, whether by the simple agency of the poison, or, as at other times, by the joint agency of the poison and of some separate incidental condition or conditions of a hurtful character. Of these we obtain examples in pestilent atmospheric influences, insalubrity of situation, and unskilful treatment.

It is hardly paradoxical to affirm that neither small-pox, measles, nor scarlet fever, requires, in itself, any treatment. For the use of treatment is not on account of any fatal tendency in these curable diseases themselves, but owing to the accidents of ever-varying complexion to which the constitution is more or less subject during the presence of each.

Among the most serious constitutional accidents to be apprehended are exhaustion, putrescence, and over-excitement. And every one of these states, if it cannot be counteracted in its incipient stage by appropriate means, grounded on long experience, and different in each, is too apt to determine a fatal event.

Pluming itself on its contradiction of medical experience, quackery holds up one mode of treatment in all cases known by the same name, careless of the tendency of the danger, or whether it lie in exhaustion, in putrescence, or in over-excitement. And the occasional appearance of success on the part of empirical pretenders is owing either to the disease being spontaneously recovered from in spite of countervailing treatment, or to a fortuitous coincidence between the nature of the existing epidemic and the kind of treatment, whether that be stimulant and cordial, or depletive and refrigerant, on which the particular quackery resorted to relies. And, luckily for the cause of quackery, though unluckily for the progress of sound thinking in the public mind on medical topics, epidemics often retain one character for a series of years. Hence, if quackery has begun with a mode of treatment in some respects appropriate to the prevailing type of an epidemic, it may be some years, or as many years as one kind of quackery usually lasts, before the fatal consequences of the indiscriminate employment of that treatment be fairly exposed. For those alone will fall victims, on the supposition made, whose cases prove exceptions to the general rule ; or who, during an epidemic marked by one general character, as of exhaustion, putrescence, or over-excitement, have from special causes become affected with a malady of an opposite type. On the contrary, a judicious medical man, who is always on the watch for such exceptions, is often able to save the patient by varying the treatment to suit the specialties of the case.

If our readers will extend to us a little further indulgence, we will endeavour to point out to them the bearing of acute inflammation on our present purpose.

Acute inflammation is at once the character of the greatest number of fatal affections of short duration, and that kind of deviation from health which is most within the control of judicious treatment. And the corollary follows that it is the description of malady in which quackery makes the greatest havoc of human life.

In general terms, acute inflammation may be described as a disturbance of the machinery destined for the maintenance and repair of the part in which it occurs, accompanied necessarily with disorder pervading the blood and vascular system. And this addition is to be made (of the greatest moment when an organ essential to life, as the lung or liver, is the seat of the disease), namely, the interruption of the function belonging in the animal economy to the organ concerned. For if such an interruption be not speedily relieved, great and too often fatal disturbance in the offices of life will be the inevitable consequence.

The good effects of the received treatment in acute inflammations are established by such an infinite number of proofs, that one wonders how any doubt can arise even among the most negligent observers. The immediate relief, for instance, in pleurisy, to the pain, the cough, the difficulty of breathing, and the whole febrile uneasiness, by blood-letting, is conclusive as to the suitableness of the treatment of which that is the basis. And this—the fruit of experience, in a subject of observation free from any embarrassing complication—is in exact accordance with the inference by reasoning from one or two simple principles of the most general application to living action. In a disease of the highest excitement, like an unembarrassed acute inflammation, all that is known of living action enforces the necessity of a diminution of that excitement by every means already ascertained to be compatible, under such circumstances, with the continuance of life and with after-health. It is equally true in inanimate machinery and in the living frame, that any sudden alteration of the proper fabric puts an end to action. But the great source of sudden alteration in the texture of living parts is acute inflammation. The greater the excitement the greater in general is the tendency to alteration. And the suddenness of any change is seen to operate far more effectively towards a fatal event than the same amount of change more slowly produced.

With such indisputable results before us of experience and inference, we cannot but resist being persuaded by any limited induction of apparent facts, and still less by the pseudo-inductions of knavery or folly, that any remedies can subdue acute inflammation, as is taught in homœopathy and hydropathy, and in not a few other less noted methods of quackery, without being of a kind to diminish excitement.

From the unavoidable imperfections of nomenclature, there must often be included under the same name cases of so trivial a nature as hardly to require treatment, and cases of the most hazardous complexion. Inflammation of the lungs, inflammation of the liver, pleurisy, and the corresponding technical names, are terms which fail to express whether the excitement be so slight that it may be safely left to nature, or so violent that, if unabated by art, it must put an end to life in a short number of hours. It is easy to see how favourable such a state of things is to the pretensions of quackery.

The infinitesimal doses of certain drugs—for example, of phosphorus—relied on by homœopathists for the cure of inflammations, are such, we understand, that the bulk of each, as compared with the mass of the human body to be acted on, is but faintly imaged by the difference between a particle of sand and the magnitude of the earth. When an inflammation subsides under the application of the hydropathic wet sheet, or the use of a dose of phosphorus so disproportionate to the alleged effect, however appalling the name given to the disease may be, the legitimate explanation is, that it was one of those inflammations in which the excitement and tendency

to depravation of organic structure is so small that little treatment is necessary. In the bulk of acute inflammations the well-known empiricism of Sangrado, though far from being uniformly free from hazard, is on the whole safer than any other kind of empiricism. That empiricism is only not safe because acute inflammation, though less liable to variation of character than other diseases and groups of diseases, deviates in some seasons, and in all seasons in some individuals, so far from itself, that the judgment of the practitioner is called on for a new rule of practice—for a rule different from that which applies to ordinary cases.

Acute inflammation is never safely left to a spontaneous termination, except when of a faint shade, and other circumstances are favourable to the regulated exercise of the self-healing power of nature. All unbiassed experience attests the danger of leaving inflammations of internal parts to themselves, or to inefficient treatment. It is not the speedy occurrence of death that is the sign of such an error; for under the appearance of a favourable termination the seeds of new diseases may be originating that are to extinguish life at the end of months or years. Without treatment, or under nominal treatment, like that of homœopathy, many inflammations will subside without being subdued, leaving behind them alterations of organic fabric, the first commencement of protracted and ultimately fatal ill health. Finally, in acute inflammations, death is far more frequently due to sins of omission than to sins of commission. And sins of omission are the faults chargeable against most kinds of quackery, and against most of those practitioners whose vanity leads them to flatter themselves that a small experience within a limited circle, and that probably many times resting on pseudo-observation, should outweigh the convictions of the profession at large, founded on the experience of ages. No kind of quackery can bear to be tried by the ultimate result of inflammatory diseases, when the exact history of any considerable number of the alleged cures can be traced onwards for several years.

But all inflammations are not of the character we have been insisting on. And certain chronic inflammations, as well as some other chronic diseases, under a new point of view, will illustrate the difficulty of judging, without adequate knowledge, in the questions at issue between quackery and regular medicine. Many such diseases are cured by time—that is, by the power of recovery inherent in the constitution, as soon as obstacles before existing to the exercise of this power have lost their previous force. Of this description are some slow inflammations of organs not altogether essential to life—for example, chronic rheumatism, inflammations of the periosteum, that is, of the membrane investing the bones, inflammations of the bones themselves, and of the textures entering into the joints. Such diseases are particularly apt to arise along with various forms of slow derangement of health, that is, some one of them is often present in addition to a chronic state of ill health. And unless it be possible to amend the general health, these inflammations often prove refractory under all modes of treatment. If that amendment has once begun, as often happens from unobserved causes, the first remedy that happens subsequently to be used carries off undeservedly the credit of the cure. A familiar example will make this intelligible. A patient resorts to a watering-place, leaving off for a time some harassing employment, when a signal improvement of general health follows. Then the local disease, which probably for years has proved the source of annoyance and disquietude, yields at last. On how slender evidence, then, does the medical practitioner or the quack-

doctor of the place, as the case may be, obtain in the eye of the public the praise of a cure, to the discredit perhaps of the original medical attendant, whose remedies would hardly have failed of effect with the same allowance of time, and with the same relief from the anxieties of business!

Among the chronic maladies, besides, which time has the chief hand in curing, are many injuries of joints, the profitable field of the boastful bone-doctor, and not a few disordered states of secretion. These last arise under multiform circumstances, but under none oftener than at critical periods of life. The cure is generally slow and imperceptible, and often much promoted by unobserved alterations in the mode of life, and by the unnoticed growth of various new relations of health. And it is too often the lot of the medical man, who by skilful treatment, during the most critical period, has preserved unbroken the strength necessary for the natural cure, to be blamed for the tediousness of the disease. Here again fortune favours the quack-doctor, who steps in at a happy moment, and reaps all the credit of a cure which took place in spite of his nostrums.

Lastly, among the chronic disorders which illustrate the view taken in regular medicine of the nature of diseases and treatment, are many complex forms of nervous derangement or perversions of the nervous power. These time often cures. For in the onward progress of life the whole energy of health sometimes improves, or the entire character of the constitution alters, or else slow inflammatory action, by which irritation has been kept up, subsides, or other sources of irritation gradually lose their force. When, in cases of this kind, loss of motion is the chief symptom, the disease may have become cured for some time before the person is aware of it. For having become habituated to the motionless state of the affected part, he may make no effort to move it for months or years after the ability to move it has returned. In such a case, whatever first calls forth the successful effort cannot fail to carry off the praise of a cure. The view here taken explains a multitude of difficulties.

Dr Abercrombie cites the case of a man, who, when his house caught fire, recovered the long-lost use of his legs. And the so-called dumb son of Crœsus, who regained his voice in time to save his father's life in battle, is probably another instance of the same description. In this last case, however, we assume that the ancient historians have confounded, as might easily happen, the loss of voice with dumbness or loss of articulate speech; when a person has lost his voice, he still retains the power of speech, but he speaks in a whisper. The lost voice is sometimes suddenly restored by a smart shock of electricity, which may be supposed to act much in the same way as the emotion of sudden fear for his father's life on the son of the King of Lydia. If the young man was really dumb, this explanation is hardly applicable. There is, however, a story which some of our readers may remember, in Boz's Life of Grimaldi, which, if not altogether apocryphal, would show that even dumbness may be recovered from under like circumstances. The hero of the tale is a sailor, who, after having been deaf and dumb for several years, suddenly recovered his hearing and speech under the excitement produced by Grimaldi's grimaces.

From the sketch just given, we trust it has appeared to the satisfaction of our readers, that the sources of fallacy in the judgments of the public on points of medicine, are more numerous than could at first sight be suspected; that there are many diseases which give so plausible a colour to the pretensions, however unfounded, of charlatan practitioners, as cannot but deceive the unwary; and that there is a long catalogue of prevailing maladies, in which

to rely on their boastful promises is to trifle in the most hazardous manner with the sacredness of human life.

To decry regular medicine, and to heap abuse on its best established usages, is characteristic of all modes and forms of quackery. Let us consider for a few moments how far such abuse is well deserved.

In medicine there has been much absurdity, as one might expect in a profession which has existed among recorded sciences for more than two thousand years. But is medicine in this respect more censurable than other sciences which had an early date? It would be easy to show that no department of knowledge has kept itself more free from the absurdities of ignorant ages than regular medicine. We shall not surely be required to enrol in the regular profession of medicine every pretender, throughout past ages, to the cure of the diseases. Thus, for any one at present to place Hahnemann among the worthies of medicine, side by side with Hippocrates, would be indeed to beg a question which surely at the least is still unsettled. The medicine taught in the works of Hippocrates, nearly as far as it goes, is the strictly regular medicine of our day. The dogmas of Hahnemann are entirely at variance with the medicine of Hippocrates. If the name of Hahnemann survive to after ages, Hippocrates must sink into insignificance. There are no doubt points in common ; but the points of agreement are trivial compared with the points of difference. The end of all medical science is the cure of diseases. If there be no two points in common between the treatment of Hippocrates and the treatment of Hahnemann, their respective systems must be pronounced to be radically different, to have no pretensions to come of a common stock. The treatment made known to us by Hippocrates was founded on experience, and in its most essential points has been confirmed by the almost universal testimony of the profession down to our time. The treatment of Hahnemann professes to rest likewise on experience. But his experience is not the experience of the age of Hippocrates, and of the medical profession downwards. It is an experience peculiarly his own. Hahnemann cannot be said to belong to the medical profession otherwise than as having held a medical diploma. And this surely is no title at all in one who rejects the essential basis of the profession, and declares the sum of its experience through more than two thousand years to be a lie. If it be said that Hahnemann did belong to the medical profession because he received the usual education of a medical man, we would pronounce it to be as valid to say that a medical man, who after the completion of his education becomes mad, is a sound practitioner.

It may be conceived that he aimed at introducing no greater innovation into medicine than Stahl, Hoffmann, Boerhaave, or Cullen. They were severally the founders of systems ; but the difference is, that their systems were not opposed to the medicine of Hippocrates taken as a type of the profession, but embraced it. And here we discover an exact test by which to ascertain whether the founder of a new system belong or not in strictness to the medical profession. There is a broad distinction between that kind of innovation which adds to a department of knowledge, or remodels the facts before accumulated under such or such a head, and that opposite kind of innovation which pronounces what had been before recognised as a branch of science, to have been a pseudo-science, composed merely of so-called facts, connected together by misapprehensions under the disguise of principles. If any man can be termed the founder of a system, surely Newton is entitled to that honour. Yet the idea of universal gravitation

arose in his mind without the addition of one new fact to those before accumulated in physical science. His discovery did not contradict, but confirmed the knowledge already stored up in astronomy and the allied physical subjects, by showing that a fixed order and reciprocal dependence existed among the facts before ascertained.

Regular medicine, then, owns its descent from the school of Hippocrates. It is in effect Hippocratic medicine augmented, improved, and polished by the lights of succeeding ages. And all innovations which reject the essential basis of this school must be included under the name of non-Hippocratic. The absurdities commonly thought to disfigure the annals of medicine, in which we firmly believe Hahnemannism will one day be placed, belong chiefly to the non-Hippocratic division. And, therefore, regular medicine is not to be charged with the anilities which occur in the history of mankind in regard to the alleged means of curing diseases.

There cannot be a stronger evidence of the foundation of the Hippocratic medicine being fixed essentially on facts open to observation in all ages, than its endurance through so many generations, amidst the wreck of all kinds of systems, and without the continuance of any blind veneration for the name or for the works of this author.

One system blots out the memory of another ; Stahl is overthrown by Hoffmann, Boerhaave by Cullen. Yet in such successive contests the vanquished and the victors for the time equally bow with reverence to the symbols of regular practice as represented in Hippocratic medicine.

When, then, we set aside the men whose conduct and opinions exclude them from the regular profession, the disagreements among medical men, of which so much is made in all attacks on the profession by interested parties, though still we admit too great, become trivial as compared with the numerous points on which all are agreed. It would be surprising if there were not considerable disagreements ; nay, were there not disagreements, the public would have reason to suspect the sincerity of the profession in general. For that profession is composed of a large body of men, not for the most part calm philosophers, but persons engaged in the actual business of life, struggling with rivals for superiority, and withdrawn in the mass from the simple contemplation of physiological truth by the necessity for accommodating themselves in some degree to the waywardness of the public mind. Some among so many so situated cannot always be restrained by the example of their more sensible brethren from striving to render themselves singular by the novelty or peculiarity of their views, or to place themselves apart from the common herd by the eccentricity of their opinions, while perhaps they still keep within the bounds of Hippocratic medicine. This conduct, we grant, is excusable only when kept within the narrowest limits. But the public still give to less scrupulous men more than enough of encouragement to parade before them the points on which they differ from their brethren and the advantageous peculiarities of their own practice. Nor would the public err, if, remembering that they cannot be the fit umpires in debated points regarding the treatment of diseases, they looked on every medical man who makes a merit to them of the differences between himself and his brethren as in the equivocal position of one who would enjoy the monopoly without the shame of a quack-doctor.

To differ from his brethren, and to make the most of that difference to enhance his own reputation with the unthinking, to blame their treatment as often as a safe opportunity offers, to listen with the broadest marks of surprise to the patient's account of the remedies he has been put through

by other practitioners, and, while he inwardly chuckles at the rising credulity of his dupe, to hold up his hands and wonder that he is alive, are not newly discovered arts, but in all ages the vulgar expedients of low cunning. Such despicable manœuvres are now, it is to be hoped, on the decline ; but for their existence at all the public are to blame, since without their countenance no motive would exist for such conduct.

What is all that to the purpose ?—cries some new stage-doctor disguised in a few tag-rags of science. Is not your Hippocratic medicine the source of an imperfect art ? Does it not often fail to accomplish its objects ? Why should it be impossible, by a discovery as sudden as Harvey's or Newton's, and such as I have made, to place medicine on the footing of an exact science ? And many, doubtless, will re-echo—Why ?

The first thing that strikes us here, is the oddness of the choice almost uniformly made of the person who is to put shame on the honoured brows of such men as Sydenham, Boerhaave, Hoffmann, Cullen, Hunter—as if something like the Mahometan reverence for idiots, as favoured of Heaven, had taken root in Christian lands ;—witness the house-painter of Limerick, the clodhopper of Gräfenberg.

But what kind of certainty is desired for medicine ? Is there any one so short-sighted as not to see that a close limit is drawn around the power of medicine by the visible hand of the All-wise Ruler of created things ? In the economy of nature there is assigned to medicine a comparatively narrow province. Is it desired that medicine should be of such certainty, that the death of age should be exchanged for an indefinite renewal of youth ? Some such ideas Condorcet insinuated even when the guillotine hung over his head, but our age hardly admits such follies to a pot-house hearing. But the maligners of Hippocratic medicine would perhaps be content could its power make men live, if not unaffected with disease, safe at least from its fatal effects, up to the alleged age of Parr or Jenkins !

Next, what is the improvement in certainty expected from surgery in the effects of accidents ? Nothing less, we suppose, than shall suffice to put an end to the very name of mortal wounds in the field of battle—restraining the effects of the now destructive engines of modern warfare to wounds curable within a few days by some Promethean process, the discovery of which is reserved for some still unborn Preisnitz or Hahnemann in the department of surgery.

It would be easy to point out the boundaries within which, by the visible ordinances of living nature, the advance of surgery must be circumscribed. But by what steps has surgery so far proceeded towards its appointed limits ? —not surely by the discovery of special remedies such as quackery delights in ; but by the unwearied study of the process by which wounds heal under the direction of nature, and by vigilance to remark the incidental circumstances which in each case may have forwarded or retarded the efforts of the self-healing power. For surgery owes all its undisputed modern superiority, not to the sudden discoveries of individual surgeons favoured by fortune, but to the slow growth of physiological knowledge—of the knowledge which explains the essential laws of the animal economy. Each advance in such knowledge gives to the scientific surgeon the power to penetrate farther by observation into the before-hidden acts by which the process of healing is forwarded or retarded. And the same remark may be made of the study of organic nature in general, whether in health or disease. No acuteness of sense—no assiduity of attention—can make a successful observer in organic nature, without a previous knowledge of some

part of its laws. The honest witness in behalf of quackery, ignorant of the fallacies springing from this source, is imposed upon at every step by what he sincerely believes to be the evidence of his senses.

To any one, then, who considers the subject rationally and calmly, without forgetting the indisputable conditions on which man exists upon earth, or the known relations between him and the rest of nature, the whole of our present medicine, both as an art and as a science, when tried by the state of our advancement in other parts of complex knowledge, will at once appear to be just what a person of judgment and well-informed mind would expect it to be. It is not, indeed, a perfect science, nor capable, as an art, of preventing the approaches of death under all circumstances; yet fit to afford the means to those who will act on its precepts, of attaining a greatly increased average value of life,—to give protection against much of the suffering naturally inseparable from diseases, and, what is often its chief use, to provide a guard against the aggravation of the danger and the unavoidable ills of sickness by the rashness of officious meddlers in the sick-chamber. Such meddlers are hardly a less evil than quack-doctors. Very well-meaning people no doubt they are. But they forget how dangerous the little knowledge universally is; and, trusting to the chapter of accidents for success, often persuade the patient, to the great hazard of his life, to try their little nostrums in preference to the precepts resting on the past experience of the profession from before the time of Hippocrates to our own.

Medical men commit errors sometimes, and these errors doubtless are occasionally of fatal consequence. But what profession among men is exempt from the like misfortune? Does any one propose to himself to intrust his affairs to some ignorant bragging pettifogger because solicitors of eminence have made mistakes? Or, would any one advise the world to employ pretended engineers, pretended shipwrights, or pretended builders, on our bridges, our ships, or our houses, because mistakes even affecting human life have been brought home to regularly-trained members of these occupations?

When the medical profession, as a body, discover a usage to have proved injurious, it is at once discontinued; when a medical practitioner sees that he has used a remedy under inappropriate circumstances, he avoids that error in future. Thus every mistake in regular medicine becomes the means either of general or of individual improvement. But quackery is committed to pursue one line of practice "nulla vestigia retrorsum;" the show of efficacy in the boasted nostrum or string of nostrums must be maintained at any cost of human life.

It may be replied to our argument, that much of what has been said is true as respects common quackery, but that homœopathy should be made an exception, inasmuch as, while its supporters are men of character and education, it acknowledges the diagnostics of diseases and shades of diseases, the usefulness of pathology, and rejects merely the remedies of the established school, for which it substitutes others resting on the authority of observation.

We admit at once that homœopathy is an idolatry "majorum gentium;" that it is calculated to impose on minds of higher calibre than those of the little vulgar who were the victims of Dr Solomon and Mr Lignum. Nay, we will allow that it far outvies in ingenuity the petty contrivances of Morrison, St John Long, and Preisnitz. In fine, we will declare, that the system is so subtile as to hoodwink, not the patients merely, but the practitioners themselves, as soon as they have learned to prescribe by the rules for the production of an infinite series. We pronounce homœopathy, if not

actual quackery, at best closely akin to quackery. Unequivocal marks of its consanguinity with quackery discover themselves at every step, notwithstanding the disguise of science which it assumes. The professors of homœopathy may be, as a body, guiltless of the knavery with which quackery is for the most part chargeable. The honesty of witnesses, is no sufficient security against deception. Accordingly, with all the knavery that belongs to quackery, there is in the world no small proportion of honest quackery. Nor can we doubt that a great number of homœopathic practitioners impose upon their patients only because they themselves are first the victims of self-deception.

It needs no very extensive knowledge of mankind to obtain the conviction that there are in the world a good many persons, otherwise even of shining talents, who have not the gifts of plain sense and sober judgment. Now, without these gifts, the experience of all ages shows that no pains of observation can give wisdom—that without them even the soundest, rules of philosophy lead but to absurdity. But if there be any one subject professing to rest on the rules of induction, in which there is unusual difficulty, and therefore standing in particular need of the aid of those gifts, that subject is the determination and verification of medical facts as respects the effect of remedies on diseases. Nothing but time and a host of observers of tried sense, judgment, and good faith, can overcome the difficulty. In this respect the pretensions of homœopathy, as compared with regular medicine, are ridiculous in the extreme.

We cannot take the time at present to enter on any searching examination of their so-called observations. This we may attempt on another occasion. But we should like our readers to hear their answer to this question,—Why the observations of Hahnemann and his followers, made within a short time and by persons of no recognised character for good faith, should be held to set at nought the accumulated and oft-corrected experience of past ages? The answer to this question volunteered at once by the whole sect, exhibits the system emblazoned with the unequivocal ensigns of quackery—for it amounts to this, *the exclusive credibility of their experiments, the exclusive virtue of their remedies, their exclusive title to make use of broad assertion in lieu of proof.* These we regard as the infallible signs of quackery ; and those, we think, who hesitate to bestow on their system the title of quackery, will have no alternative but to deny the significance of these signs ; for it is impossible to maintain that these signs are not every where stamped upon their works.

Dr Wood sums up his remarks on their experiments in the following passage :—

" But when we come to examine these experiments, they are incapable of establishing even probable truth, much less statements so marvellous as those of homœopathy. Whichever way we turn, on whatever side we look, we still encounter disappointment. That such a system should have its professors is not wonderful, when the credulity of man offers so tempting a bait. That such absurdities should have their admirers, will not surprise those who have studied human nature in its various and more painful phases. That such a practice should boast of cures, is no novelty in the history of empiricism. The same sources of fallacy may be again and again taken advantage of by each new adventurer in this field ; and, when homœopathy shall have passed away, it will only be to make room for some new mental epidemic—to be a new nine days' wonder, and then expire."—*Homœopathy Unmasked*, pp. 142, 143.

From the " Defence of Hahnemann and his Doctrines" we extract the following passage, at the risk of giving a new lesson to the Solomons and Lignums of the newspapers :—

" ' The greater part of the emoluments of medical men of the old school arises from the imperfections of their practice. Whether they have the wisdom, as many, especially the more experienced of them, profess, to ' do very little, and let nature take her own way ;' or, with the impatience of youth and inexperience, deal pill and potion right and left, cut, burn, blister, bleed, and purge, in abundant pennyworth for their fee, their patients lie long on their hands for the most part, and the attendance is profitable in proportion. Again, the utter incompetency of the means they use to cure a multitude of chronic ailments, so far from being an evil to them, is a great and universal benefit ; for the unhappy persons on whom they practise, failing to find relief from one, hie to another of the same trade ; and thus from year to year make the dismal round, spending, it may be, all their substance on physicians, like the woman of old. Homœopathy, by curing recent diseases more promptly, and, besides curing more certainly, demanding less frequent visits to those labouring under the more protracted, just because the operation of its medicines does not need to be so suspected and watched, as is notorious in the case of the Allopathic drugs,—cannot fail to make deep inroads into professional incomes, and to lessen very much the number of practitioners that shall be needed to meet the altered circumstances of the public. Then, as to the apothecaries, they, of all persons connected with the profession, have the most reason to dread the general adoption of homœopathy ; whether, as in Scotland, they subsist by merely vending drugs ; or, as is the case in England, are, at the same time, practitioners, who are paid by the quantity of medicine which their employers swallow. The reader will perceive what sort of motives these ' practitioners of virtue' have for their opposition to homœopathy ; and, if there are some whose disinclination to examine the improved system we cannot fairly ascribe to such sources, we shall not be far wrong in suspecting that nine-tenths of them owe their reluctance to a dislike of innovations which would overturn the system with which all their own labours are identified, and necessitates the relinquishing of dogmata and methods by which they have been accustomed to be guided, for elementary studies and a new experience, not to be acquired without much application and fatigue, both of body and mind." Pp. 22, 23.

From Dr Wood's Reply we take the following summary of HOMŒOPATHIC FACTS for the amusement of our readers. Dr W. copies them verbatim from Laurie's translation of " Jahr's Manual," which is an abridgment of Hahnemann's " Materia Medica Pura."

" ' Common salt' produces ' awkwardness—incapacity for reflection—anguish, sometimes during a storm, but especially at night—numbness and insensibility on one side of the nose—repugnance to tobacco smoke—paralytic weakness of the legs—corns on the feet and warts on the hands—hatred to persons from whom offence has formerly been received,' &c.

" ' Nutmeg' produces ' bloody sweat and epilepsy.'

" ' Agaricus' produces ' an inclination to make verses and prophesy.'

" ' Tea' produces ' a sensation of hunger and a dislike to all food, and great relaxation of the stomach, which hangs down like an empty purse.'

" The ' South Pole of the Magnet' produces ' dislike to society and laughing faces,' and ' causes the toe nails to penetrate the flesh.'

" The ' Sweet Violet' causes ' one to lie on the back, while asleep at night,

with the left hand passed under the head, and the knees bent ;' and also produces 'great flow of unsettled and confused ideas,' and 'remarkable clearness and great activity of mind.'

" 'Mephitis Putorius, the fetid juice of the polar pole-cat,' renders 'washing with cold water very agreeable.'*   And so with the rest.

" We find, too, that these men—some of whom attained a good old age, and were esteemed healthy and sane by their friends—experimented on themselves with substances which are said to produce, when taken by a healthy person, 'attacks of Tetanus and Lock-jaw,' 'Caries and painful ulcers, which attack the bones and perforate them to the marrow ;' as Angustura.

" 'Protrusion and incarceration of inguinal hernia ;' as Alumina.

" 'Inflammation of the tendons ;' as Antimony.

" 'Loss of memory, with diminution of the intellectual powers ;' as Ammonium.

" 'An irresistible desire to blaspheme and to swear ;' as Anacardium—the Cashew Nut.

" Perhaps the 'Defence of Hahnemann' was written under the influence of Granatum, which produces 'arrogance ;'—or Belladonna, which causes 'a desire to bark and bite ;'—or Ignatia, from which flows 'effrontery ;'—or Anacardium, which stimulates to 'insults, invectives, and outrages ;'—or perhaps the indecency which appears in some homœopathic works, arises from Belladonna, which produces 'immodesty.'   We presume it is for the purpose of *proving*, beyond a doubt, that the symptoms alleged to have been produced are actually the result of the remedies, that we are told that Cayenne Pepper causes ' pain in the roots of the hair *after scratching ;*' that Animal Charcoal produces 'pain and blistering of the seat *after riding ;*' that Berberis produces 'sensibility of the eyes to the brightness of the sun ;' that Nutmeg causes ' shocks of pain in the teeth, after having drunk cold water ;' that Sulphuret of Lime causes ' cough after drinking,' &c.

" When they tell us of their wonderful cures of physical diseases, of which the public know nothing, we refer our readers to their pretended power over moral disease, of which they can, in so far, judge.   They will find that Digitalis is recommended as a homœopathic cure for Sadness ; that those suffering from ' Anguish,'—if it occurs in the ' open air,' are to take ' Bark ;' —if ' in a carriage,' ' Borax.'   Should they be assailed ' in the morning,' let them take—' Arsenic ;' if ' in the evening,'—' Ambra.'

" 'Awkwardness' is *now* to be cured by ' Anacardium,' and 'embarrassment in society' by ' Ambra ;' while ' a child who cannot bear to be looked at,' is to be treated with ' Antimonium.'

" Fear, too, has its appropriate remedies.   Is it of ' contagious diseases ?' it is to be cured by ' Baryta ;' is it of 'misfortunes ?' by ' Calcarea ;' is it ' of robbers ?'—' Arsenic ;' is it ' of spectres ?'—' Aconite ;' is it ' of solitude ?'— ' Lycopodium ;' is it ' of dogs ?'—' Bark ;' is it ' at night ?'—' Lamp-black ;' is it in ' the evening ?'—' Ivory Black.'

---

* " The propriety of this symptom will be obvious from the following description, from Cuvier's ' Animal Kingdom.'

" ' The intensity of their most nauseous suffocating stench, which has been described as resembling that of the Fitchet, mingled with assafœtida, is scarcely credible.'   ' It will comfort homœopathic patients to find one of their eminent authors asserting, that ' their remedies are in almost all cases destitute of sensible properties, such as colour, taste, or *smell.*' '—(*Homœopathic Journal,* vol. i. p. 22.) The efficacy of trituration must indeed be wonderful !"

"But if fear becomes 'despair,' new remedies are at hand.   Is it a 'Despair of being cured ?' let the patient take 'Bryonia ;'* 'Hardness of heart' finds its appropriate remedy in 'Anacardium,' which is also recommended for 'Impiety ;' while 'Despair of one's eternal salvation' is to be treated by 'Lycopodium.'

"A 'Disposition to make mistakes' is to be remedied—if 'when calculating,' by 'Ammonium Carbonicum ;' if when 'speaking,' by 'Alumina ;' if 'about weights and measures,' by 'Nux Vomica ;' if 'when writing,' by 'Bovista.' "—*Sequel to Homœopathy Unmasked, p. 4-7.*

To enter into a particular detail of the respective characters of the works before us, is foreign to our present purpose.   Dr Wood has performed the task which he has imposed on himself with much ability.   The answer contained in the " Defence of Hahnemann and his Doctrines," &c., is an able but unscrupulous performance.   The author or authors of the " Defence," secure in their anonymous position, have felt no necessity for restraint in the abuse of their antagonist, and little, we are compelled to say, in the misrepresentation of his statements.   Dr Wood's reply, the third work on our list, exhibits the defenders in far from an enviable light.

In " Homœopathy Unmasked," the author enters upon the subject from the bottom.   At the outset he offers some general considerations applicable to Hahnemann's so-called universal law, " similia similibus curantur."   He shows successfully that a general law of the character which it affects is inapplicable to medicine.   He then points out the want of definite signification in the word " similia," used in the expression of the law ; and finally proves that, in whatever sense " similia" is taken, the law is not universal, even according to the homœopathic interpretation.

By comparing the several recognised kinds of evidence with that put forward in behalf of this so-called law, he shows it conclusively to be an assumption not supported by facts, but resting on assertions ; and, further, that even the conversion of those assertions into facts would fail to establish it as a law.   He then enters upon a review of the inconsistencies of the whole scheme of homœopathy—of the frequent deviations of its professors from the rules laid down by themselves as unalterable—of the absurdities and contradictions of the infinitesimal-dose system—and, finally, of the total deficiency in their witnesses of the qualities requisite to make testimony available.

In an appendix, we find numerous cases illustrative of the fatal consequences of trusting to homœopathic treatment in acute diseases—of the practice of the homœopathists to dress up slight maladies in formidable names—and of the facility with which quackery in general succeeds in producing an imposing array of apparent cures.

Our readers will see that Dr Wood has spared no pains to probe this matter to the bottom ; and if they are desirous to witness the operation of the machinery behind the homœopathic curtain, we recommend to them a perusal of his book.

No doubt, when they take up the anonymous defence, they will feel some misgivings as to Dr Wood's knowledge, ability, and good faith ; but a

---

* " Bryony is a long-established favourite among charlatans. Miller says, ' Mountebanks carry about fictitious images, shaped from the roots of bryony and other plants, cut into form, or forced to grow through moulds of earthen ware, as mandrake roots. These they sell to silly women under the pretext that by their potency,' &c. &c."

very slight glance at his reply in the " Sequel to Homœopathy Unmasked," and particularly at the appendix, will satisfy every one that Dr Wood is deficient in none of those qualities, and that the defenders, in too many instances, have sought to screen homœopathy by stabbing in the dark.

The cleverness of the defence lies in the skilful choice of a few " ad captandum" topics, which are worked up with little regard to truth, in a manner well fitted to impose on non-professional persons.

As a specimen of bold assertion, we would direct attention to the matchless attempt to draw a parallel between the opposition offered by an insignificant handful of unknown medical practitioners for a short time to Jenner's discovery, and that given for so many years by the profession at large to the ravings of Hahnemann. On this subject Dr Wood's observations, in the "Sequel to Homœopathy Unmasked," will be found highly interesting.

We have not left ourselves room to make any remark on the fourth book on our list—Sir Charles Scudamore's Account of Hydropathy. We will merely say, that if Sir Charles' patronage of this new quackery gain him some additional weight with the credulous part of the public, it cannot but impair the well-merited reputation which he once held in his own profession.

If any of our readers, in opposition to the views taken in this article, still feel compelled to dwell on what they regard as cases of cure within their own experience, under homœopathic or any other kind of quackish treatment, we beg leave to remind them, that they can never have known an honest believer in ghosts or in witchcraft who had not abundance of strongly-witnessed affirmations in the shape of positive facts to produce from his budget ;—again, that none of the delusions referred to at the outset of this review were unsupported in their day by numerous attestations and a multitude of apparent facts ; and, lastly, that we do not call upon them to believe that their friend M. or N. was not at a certain time affected with a particular disease (the name of a particular disease being at least given to his complaint)—that he did not waste ten or twenty days in taking as much phosphorus as amounts in all to a small fraction of the quantity which must enter every man's frame as often as he lights his candle with a Congreve match—and that, at the end of a certain number of weeks, he was not freed from disease. All this we admit to have taken place ; but we deny the connexion between the recovery and the use of the particular remedy. We say that he would have recovered equally well under the use of bread pills, provided in the mean time he had been kept safe from hurtful agencies ; and, it may be, provided some legend had been connected with the pills. But while we deny the connexion between the cure and the use of a particular homœopathic remedy, it may be seen that we are far from affirming that the patient would in every case recover as well under no treatment at all as under homœopathic treatment. The danger of homœopathy lies in the neglect of active remedies in acute disease—in the refusal to moderate the actions of the body, which are fitted to restore health when duly regulated, but which destroy life when allowed to become over-excited. In some chronic diseases, homœopathy may have an effect not superior to that of judicious regular practice, yet beneficial as compared with no treatment at all. Any direct curative effect in their infinitesimal doses we must positively disbelieve ; yet the daily administration of remedies free from noxious effects upholds the moral treatment. And it should be confessed, that some of the remedies which enter into the alterative treatment of regular practice most probably have no other operation than that of seconding the moral treatment of chronic diseases.

Doubtless, the good effects of homœopathy are produced almost exclusively by regimen and the moral results of treatment. Of the powerful aid of regimen the homœopathists know well how to avail themselves. Regimen and moral treatment accomplish all or nearly all that homœopathy is capable of. Their infinitesimal doses have about as little to do with the recoveries that take place, as St Swithin has with the rain that is now falling in torrents as we write. On the subject of regimen our readers need no explanation. Of what we mean by moral treatment we must try before concluding to give a faint idea.

There are few men and fewer women so independent of their fellow-creatures as not to feel some alleviation of the burden of suffering, whether bodily or mental, by the sympathy and support of those around. them. Now, there are numerous chronic diseases which create painful apprehensions, to some degree in the minds of all, and in a high degree in those who are very dependent on the support of others for the share of fortitude which they can call forth. If such diseases be curable, as nothing aggravates them more than despondency and downcast spirits, so nothing tends more to a speedy cure than cheerfulness and hope. Moral treatment, then, as far as is required for our present purpose, may be described as including all the measures by which such a temper of mind can be produced and maintained. The mere administration of drugs in which the patient has confidence is a part of the moral treatment. But the most effectual part of the moral treatment consists in the frequent visits of a medical attendant in whom the patient reposes trust. Each visit serves to quiet some new apprehension, and brings a fresh assurance of the curable nature of the disease.

Hear the late Dr Cheyne on this subject :—" We may be permitted to state, in support of this observation, a fact which we have often witnessed, namely, the temporary advantage which is generally derived from a change of measures. When an epileptic patient is placed under the care of a confident empiric, or of a physician who is in great repute, the disease will often be suspended for a considerable time, and to the eye of a sanguine person appear cured ; while on the other hand, after a long suspension, when the disease returns, such disappointment is produced as to fill the patient with the gloom of despair, a state of mind which would seem to renew the energy of those causes upon which the fits depend, and hence they occur at shorter intervals and with greater violence than ever.

" The empiric, well knowing how much depends on confidence, has various methods of fixing unstable minds : he cajoles and blusters, and with equal power of fulfilment he promises and threatens : he knows that he may draw upon the imagination of his patient to any amount, and that his draft will be honoured ; that the mystery with which he clothes all his measures is often the cause of his success ; and hence he provides his own remedies, and invests them with supposititious activity. Give a patient a few grains of liquorice-powder, and let him be told that he has just swallowed part of the skull of a malefactor (which once was considered a sovereign remedy for epilepsy), or that this powder contains a substance of which, according to the German dreamer, a thousandth part of a grain is the proper dose, and you often may thus cure a disease which is anything but imaginary."*

In this department of treatment, when the patient is not deficient in credulity, it must be confessed that the audacity of quackery carries it triumphantly over the conscientious diffidence of regular practice.

Beyond one or two parting words, we will ask no further indulgence.

---

* Cyclopedia of Practical Medicine ; under Epilepsy.

Is there any single human being who can safely boast of having in him none of the elements of the dupe ? Who is there that has not his weak side ? Is there any one who is safe from frequent imposition without an unrelaxing vigilance ? What a picture does the past history of the world offer of the craft of knavery and the simplicity of its victims ! Look at the quick succession in which new Juggernauts have arisen, as the hollowness of each preceding idol has been exposed. Our age cannot flatter itself that its intrenchments against the assaults of this kind of imposition are impregnable. Stronger without doubt they are than those our predecessors stood behind. But as the age becomes more wary, the tempter becomes more wily. Compare astrology with the clumsy inventions which preceded it. How much more refined and plausible is the mystery of the horoscope than the barbarous inspection of the smoking entrails of a ram or heifer !

In the days of Edward the Confessor, or of St Louis, the royal touch for the cure of king's evil shocked nobody—yet we suspect the practice long outlasted the faith at least of the court, both in France and England. Dr Gregory used to relate in his lectures that he had seen Louis the Sixteenth publicly touch for scrofula, and our readers will remember that Samuel Johnson, when a boy, was brought from Leicester to London to be touched by Queen Anne. The royal quacks exhibited as much penetration in the choice of their disease as those that spring up among the cunning vulgar. The spontaneous healing up of simple scrofula gives origin to the reputation of multitudes of inert drugs accounted remedies in that disease. And to pass by the practice of professed quacks, we often meet with old women of both sexes standing aghast at their own success, if they chance to have used their nostrum when the ulcers were on the point of closing of their own accord.

But Hahnemannism is a new era in the history of quackery, at least in this country. Our age has at last reached, or is approaching, that pitch of resistance to gross delusion that nothing short of the transcendental can make a profitable impression. In certain spots of Germany is the soil in which transcendentalism, like the Rosicrucian illumination of old, delights to blossom and bear fruit.

Let the world continue to shut the eyes to the real nature of diseases and remedies, and to the proper office of medical practitioners, and this fertile soil will not fail to gratify their longings for novelties with fresh forms of delusion, transcendental in every feature, long after Hahnemannism has ceased to stink in the nostrils. It is Goldfuss or Goldbeck (both are equally transcendental), who wrote a book, " On the meaning of O, or the first dawn of light in the horizon of truth." Whatever the book may be, here is a title out of which a thousand Hahnemannisms might be manufactured.

To such follies common sense is the only antidote. Their complaint that we will not listen to them is as reasonable as that of the madman, who some years back tried to demonstrate that men live within this planet, and not on its outer surface. To reason against them is labour lost. To call in question their facts is to waste words on air. Against their favourite proof, vehement assertion, the voice of Stentor himself would make no head. For if put down in matter of fact, they will not scruple to deny the value of facts in evidence, and claim the privilege of transcendental minds to believe through what they call pure conception. This is undeniably the school of philosophy to which Hahnemann belongs.

If effects so astonishing have flowed from the homœopathic infinitesimals which only approach to nothing, what may not be anticipated from the mystical contemplation of O itself under the presiding genius of Dr Goldbeck ?

It is already, in short, almost an assured fact that quackery will hereafter make its more ambitious assaults on the public credulity in Britain through the medium of the still unfamiliar language of German mysticism. Homœopathy is but the van of the assailants. It has tasted of the fat of the land. What though another lustrum or two, its charm of novelty lost, will see it swept with ignominy from our shores. Its success, though transient, will tempt new assailants, as the spoils of the empire did the Goths and Vandals of old, in spite of the unceasing destruction of the first invading hordes. As the north was then the " officina virorum," so Germany is now the true " circumforaneorum officina."

Far be it from us to make a general charge against the science of Germany. We acknowledge its claims to the highest rank among the nations that cultivate medicine on a right basis. The school from which Hahnemannism sprung, and from which we surely anticipate many adventurers like Hahnemann, unless the public of this and other European countries be true to themselves, is composed of a comparatively limited number, and is confined chiefly to the minor universities. There are amongst them, however, many men of high learning, and of just pretensions to reputation, at least in the descriptive sciences. But who does not know that such qualities are perfectly compatible, not only with the want of wisdom, but of plain sense, and even with but a small share of honesty? These men confound themselves with metaphysics, which are foreign to their proper pursuits. They misunderstand their countryman Kant, and wrest his doctrines to their own confusion. From him unquestionably they borrow the idea of conviction by an inward conception without the evidence of facts. But as far as we are acquainted with his works, which is but scantily, he nowhere lays this down of cases to which facts observed by sense are applicable. It is of the operations of mind, of the conscious self, that he speaks.

However this may be, the mysticism of Kant's language, and still more the extravagant phraseology of his self-called followers, are very subversive of common sense in weak minds, and prepare them for the reception of any absurdity which is couched in the gibberish of a sect. This explains why men can gravely read and tolerate downright nonsense, such as what we quoted from Dr Wood's reply a few pages back regarding the properties of drugs, instead of casting off the yoke at once, and crying out with the rest of the world, " admissi teneatis risum amici."

Here we have not merely the loud assertion as of old in favour of the quackery that seeks for favour, but assertion couched in language that cannot be understood. And there is of course an attendant threat, actual or implied, of denouncement of Dummheit (stupidity) against all who are bold enough to confess their slowness to understand. And how many are there in every community who are not gifted with this boldness! And is it not at once apparent, that those who are least capable of pronouncing whether the point affirmed be or be not at all intelligible, will most readily receive the affirmation unquestioned, because they stand most in dread of the accusation of slowness?

Such then is the insidious nature of the influences on which those quackeries will rest of which, as we firmly believe, homœopathy is the forerunner.

Against the farther introduction of this poison into the land we would raise our voice, and call on our fellow-citizens to arouse from their slumber, and save their own minds, the minds of their wives, and of their children, from the mischievous effects of such modes of thinking, and from the unhinging power of such delusions.

PART III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

Critical Examination of the Facts bearing on Vitalism.

At the Royal Academy of Medicine of Paris, on the 13th of August, M. Virey read a short memoir, of which we offer the following translation :—

It has been said there is a unity in nature. And in truth there are some minds which so confound the principles of the physico-chemical sciences with those of the physiological sciences as to become persuaded that the former are all-sufficient to originate the phenomena of life and organization. The attractions more or less complex between the chemical elements of our earth appear to some spirits of modern times to have caused the spontaneous production of living beings during the long night of ages. Hence has arisen the idea, particularly prevalent in Germany, that *matter alone reigns*, or that the several elements of our globe possess amongst them the dispersed forces of vitality in a cryptobic state (state of latent life), yet capable, under favourable circumstances, of combining their properties for the production of balanced systems or organic forms. Here then the theory of spontaneous generation still maintains its ground.

The same principles result from the system termed the system of the philosophy of nature, or of autocratic pantheism. This system recognises in the universe but one substance which has a double aspect, and possesses extension in its capacity of matter, and intelligence in its capacity of thought. But thought cannot be manifested, according to the abettors of this hypothesis, except in connexion with the organism developed in animals.

But we have no disposition to believe that the bronze or marble of a statue has essentially in itself, or virtually contains, the elements of the sensibility and animating thought which Pigmalion sought in his Galatea, or that the radical atoms of carbon, azote, hydrogen, oxygen, &c., dissociated and dispersed by the death and putrefaction of a human brain, take up fragments of the ideas or of the perceptions which, during life, had the power of influencing them. The same fault is chargeable against Leibnitz's brilliant system of monads, which he represents as each containing an epitome of the properties of the universe.

Whatever may have been the first dark origin of things, we see at once and clearly conceive an original inert matter, fixed or in motion, of its proper nature independent of every living thing and of prior existence in our planet. It is only in the language of poetry that our globe is said to live, that the rocks of the earth can be spoken of as feeling or breathing.

No Spinosa, or Schelling, or Oken, or Carus, or Cabanis, or Lamarck, has been found to impute intelligence, or affections, or passions to the primitive inorganic mass of the globe, for example to its granite ; and this we proceed to show.

Thus every kind of matter is not capable of taking on life. Arsenic, mercury, copper, lead, baryta, &c., resist organization, or destroy it. Other mineral elements, silica, lime, &c., may enter freely into combination with animal tissues without themselves becoming endowed with life, as in the

calcareous phosphate of the bones, salts, and shells. There are then sub-
stances unsusceptible of life, and others capable of destroying what is living.
Of this kind are the purely chemical unorganizable poisons. The combina-
tions of these being inimical to all vitality, are resisted and thrown off.

We must therefore acknowledge two kingdoms quite distinct and sepa-
rable from each other, since the inert, the primitive mineral kingdom
(indigesta moles), can of itself exist, representing our planet anteriorly to all
organization, and to all life such as we are acquainted with.

The mineral atom or molecule, says Kant, has in itself the motive of
its existence ; and this is why it remains for ever indifferent to motion as
to repose. It is therefore concentrated on itself by a physico-chemical
force, which is crystallization. In truth, granite, the primitive matter, as
far as we know, of the globe, is made up of primary radicals which have
undergone combustion, the oxides of terrigenous metals, silicium, alumi-
nium, &c., fused and crystallized. Every substance liquefied by heat or dis-
solved in water is more or less susceptible of crystallization. Crystalliza-
tion thus offers the primordial form of every inorganic substance ; for even
in organized bodies whatever remains in the crystalline and concrete state
does not participate in actual life, as salts, acids, stearine, urea, &c.

And from the established fact that a mineral is made up, even in its ulti-
mate particles, of crystals, the juxtaposition of its particles can only give
rise to geometrical angular solids, as Hauy, Mitcherlich, and other minera-
logists have proved. It is therefore incapable of growth by intussusception
like the solids of a living body, of nutrition, of reproduction, and of death.
Thus it is permanent. Each particle being independent of the rest of the
mass, may be separated from it, but there is no putrefaction. Moreover, the
minerals composed of elements which have undergone combustion, or for
the most part of oxides of terrigenous metals, combine after the binary law,
as Berzelius speaks, of inorganic salts. The versatility of life is unsuitable
to the inconvertible nature of these radicles, since iron, lime, silica, and
other purely mineral substances, sulphates, hydrochlorates, phosphates, &c.,
which penetrate into living bodies, never by themselves take on the vital
movement, though by communication they are influenced through it.

The only materials susceptible of vitality and of assimilation by nutrition
are combustible substances, carbon, azote, hydrogen (even when combined
in the form of water with oxygen), and also without doubt sulphur and
phosphorus, and perhaps some of their combinations more or less permanent.

It will be seen, then, that from dead, crystalline, inactive, of themselves
motionless, divisible minerals, the organic tissue differs essentially, or rather
that it has no connexion with them.

On the contrary, the word organization expresses not only a harmonious
union of combustible elements in a state of equilibrium, or attaching them-
selves by a special force to a common centre of unity, to constitute the *indi-
vidual or self*, and to become capable of absorbing and assimilating what
accords with its own nature ; but, besides, the manifestation of a preconcerted
purpose of preservation by means of appropriate organs (members and
senses) ; and again resistance to destroying forces, and an effort to repro-
duce or multiply itself.

Neither should we with some physiologists of our times confound together
life and organization, which though coëval are not identical—for the one is
the instrument, the other is the office or mode of action ; and this last may
be suspended as in the case of a seed or an egg by cold, drying, and the like.
The material elements then of organic parts do not manifest life of them-

selves, but only through the centralizing source of their temporary associa-
tion. In like manner, various abnormal productions of both organized
kingdoms, parasitic growths and entozoa, become developed and subsist
by the mere communication of vital movement and nutrition, like the satel-
lites carried along by a planet. Of this nature are acephalocysts, fibrous
bodies, &c.

To make it appear how vainly the physico-chemical sciences have been
appealed to for an explanation of life, a short recapitulation of the chief
theories will suffice. The statico-hydraulic mechanics of Boerhaave do not
embrace in their generalization the reparative and conservative manifesta-
tions of the animal and vegetable body ; no more can the Hallerian irrita-
bility of moving fibre explain the development of the embryo chick in the
egg ; the excitability of Brown fails to afford any satisfactory light on the
transmutation of alimentary substances into our tissues and humours ; the
vital chemistry of the moderns, no more than the ancient theory of ferments,
embraces in its laws the production of the susceptibilities of sense and motion
in animals ; the properties termed vital by Bichat and other physiologists
are incapable of themselves of directing the organization of the smallest of
the viscera or of giving unity of action to the members. Again, chemistry
breaks down, disarranges, or destroys the intimate organism of the blood,
the milk, and the spermatic fluid, in analyzing them, and has not the power
to reconstruct them, while life associates and links together their elements
to defend them against all putrefaction, or to make them subservient to
assimilation.

But it is in fact the co-operative energy of an assemblage of parts
sympathising for their common defence (though less powerfully in the
vegetable kingdom) which establishes vivification in the individual.

Life cannot arise except from life by the strict process of generation.
In truth, ever since the microscope was discovered, equivocal generation
has lost its sway. The reproductive germs of the smallest and most
obscure organic bodies, down to mosses and infusory animalcules, have
been brought to light in our time. A moment's reflection shows that
the atoms disjoined at random in any kind of rottenness cannot have the
skill and foresight to construct the inward vitals or the eyes of the most
inperceptible mite any more than those of an elephant. We must leave
to the ancients the idea of monsters arising out of the mud of a deluge.

When we see the most transcendent contrivances stored up in the
nervous system of an ant—when we behold unassisted nature laying under
contribution the most mysterious laws of optics and acoustics in the organs
of sense, and the most intricate combinations of chemistry operating in
the secretions—vegetation spontaneously showing movements of the com-
pletest concert in the blossom, and almost the passion of love in fecunda-
tion ; and again, as we admire the astonishing provisions of structure in
the organs of sex to secure the reception of the proper kind of pollen or
spermatic secretion, to the exclusion of others, for the purpose of prevent-
ing allied species from being confounded together,—it is found to be impos-
sible to admit that inert inorganic matter should rise of itself to the
exercise of what must be called wisdom.

Do we not see the display of marvellous and incomprehensible instincts
of preservation in the ovum of an insect abandoned to the relentless in-
clemencies of nature ? The orphaned organism struggles single handed in
conflict with a world without. The most insignificant gnat has an implanted
power of resistance nicely adjusted to sustain the warfare of the elements ;

3 E

but in the bird and the creeping reptile the protective provisions have been so wisely adjusted to their respective positions, that without any perception of the purposed end, each directs its acts for its complete attainment.

Who does not see here a breath of wisdom, moving the living being independently of its will, or even in opposition to its will, but for a useful object, as in love or anger? This wisdom is neither in the tree nor in the animal, but already exists fore-traced in the germ (be it ovum or seed), and shown forth in that natural disposition which develops the sting of the bee, or the parts of a flower, making them expand in preparation for a task which awaits them in future.

Hence life is this active agent, essentially intelligent, yet devoid of any external manifestation of intellect. The most profound observers among the philosophers of antiquity considered it as a $\psi \upsilon \chi \eta$ (anima), delegated to each specific form, commissioned to readjust the balance deranged by diseases, to restore or repair the living fabric after amputations and loss of substance, to resist, within certain limits, destructive agencies, effecting nutrition where it is required, and in extremity sacrificing a mother to her offspring. Do such facts as those here pointed to fall within the range of any Epicurean theory of atoms?

Undoubtedly if there be in us a principle distinct from the matter of our bodies, which at times resists or modifies its tendencies, this internal autocrateia directing the economy of all organic beings presides over their reproduction ; it restores to the fœtal offspring of deformed, dwarfish, maimed, lame, or otherwise defective persons, their pure primordial and entire forms, after the exact primitive plan ordained for the species. There is therefore a wise and provident nature, assigning fixed organs so adjusted to each other as to suit the mode of life in the outward world, instructing without manifestations of being instructed ($\alpha \pi \alpha' \imath \delta \varepsilon \upsilon \tau \eta$) down to insect forms, or guiding the individual in the circle of its existence to the accomplishment of the ends of its being.

There are then conclusions in opposition to certain false opinions prevailing and taught in several medical schools of France and Germany,—which opinions have a pernicious effect on the practice of our art.

1. There are substances essentially inert, which have undergone combustion, inorganic, constituting the mineral mass of our globe, unsusceptible of life or even hostile to all vitality. The particles of these, by juxtaposition, crystallize ; thus, in opposition to the Pantheists, life does not spring from these.

2. True life exists only in organized bodies developed by generation from a spherical original (ovule or cell)—a harmonious assemblage of particles acting in one circle of unity, and up to a certain point and during a definite period of duration resisting the ordinary laws of the physical world.

3. The substances capable of anatomical combination and of development from a centre to a circumference are essentially of a combustible nature (carbon, azote, hydrogen, &c.). In this they differ from minerals, that they cannot be produced except at the surface of the earth or in the water, nor without the concurrence of the atmosphere or of oxygen, and of a mild heat and even of light.

4. Chemistry proves that carbon predominates in the vegetable textures, and on the contrary azote or ammonium in the animal. The latter require the respiration of oxygen to maintain temperature and vital excitability, while the plant absorbs carbonaceous aliments.

5. The specific forms (animal and vegetable) necessarily correspond to the proportion of organizable elements and to the presence of the conditions of warmth, light, humidity, and the annual and diurnal movements of our planet. They are moreover expressive of completeness, health, beauty. Their structures conform to the habits necessary for a life of health, or their organization varies with the climate and the situations in which they are destined to live. It is absurd to suppose that the same localities and the same circumstances should have originated beings so different from each other as those we see indigenous together.

6. Crystallization develops the forms of the mineral kingdom destitute of life, destitute of the power of reproduction. On the contrary, all that lives emanates from a germ (ovum, seed, spore, or gemmule), down to the microscopic infusoria (as Ehrenberg and other modern observers have shown) ; for there is a harmonious concurrence of parts relatively to functional purposes even in agamic animals and cryptogamic plants, and a vital power of resistance even in the entozoa of regular forms that inhabit our digestive organs, since they resist being digested.

7. This harmonious co-operation displays itself in series and groups of genera and species of animals, which, like plants, have their alliances, constituting a chain or branchings of a chain of beings cast in analogous moulds or having like structures. These families, created on a corresponding type and part of a general plan, give conclusive evidence against all alleged spontaneous or fortuitous productions. It is then impossible not to recognise here the results of an order and intelligence incompatible with inert matter. As it appears to us, a vital principle must necessarily preside over organized bodies, unceasingly flowing into them or circulating in them through an uninterrupted succession of generations. And this truth is demonstrable by facts.—*From the Gazette Médicale de Paris*, No. 33, 17 Août 1844.

SURGERY.

On Vascular Tumour of the Female Urethra. By Sir B. C. Brodie.

There is a disease to which the female urethra is liable, which never occurs in the male. The patient complains of a great deal of pain on making water, which is sometimes effected not without difficulty. If you examine the urethra, you will find a little red vascular tumour, as red as a cock's comb, and looking very much like it ; or there may be specks of increased vascularity near the orifice, not projecting at all, whilst the former vary in size from a split pea to a horse bean, and if you touch them they bleed. When they protrude externally, they are easily cured : snip the tumour off at its base with curved scissors, and when the bleeding has stopped, touch the part with nitric acid, or caustic potass ; but you must be prepared with an antidote, to prevent its burning contiguous parts. If you employ the nitric acid, it should be a solution of bicarbonate of potass ; if caustic potass, then use vinegar. When it occurs within the urethra, it is more difficult to manage, for you cannot get at it with scissors. You must then gently dilate the urethra, and by careful examination make out to which surface it is attached. Suppose (as is most usual) it be the lower surface, you must be provided with a small canula, stopped up and rounded at one end, open at the other, having a handle fixed at a right angle to the open end. Having introduced this into the urethra, slide in a stick of caustic, and the tube will protect the remaining part of the urethra ; but its lower surface

being deficient, allows the caustic to be applied to the part affected ; if you employ caustic potass, or nitric acid, you must take the same precaution as I mentioned before. The application generally requires to be repeated several times. Although this will effectually cure the disease, still it is sometimes very troublesome, as great care is required not to burn more than is necessary ; at the same time taking care entirely to remove the disease. The canula should be allowed to remain in a short time after the caustic has been removed, and the patient should not make water ; but occasionally, in spite of all your care, the disease will, after a time, be regenerated ; and I am disposed to think it is produced by disease in the kidneys.—*Clinical Lectures by* Sir B. C. BRODIE, *Medical Times, 7th September* 1844.

Two Cases of Imperforate Anus.   By L. BAUDELOCQUE, D.M.

CASE I. A child, two days old, had not yet evacuated any meconium ; several enemata being administered, were returned as given ; there was agitation, incessant cries, abdomen tense, symptoms of cerebral congestion. The finger introduced into the rectum indicated the presence of a membrane, situated at about an inch from the anus, which, when pierced, allowed the meconium and a great quantity of gases to escape. The child soon got well, the opening having been prevented from closing by the introduction of the little finger from time to time.—CASE II. A child, three days old, presented the symptoms just enumerated,—rectum ending in a cul-de-sac one inch from the anus. An opening being made, allowed nothing to escape, nor could the finger, when introduced into it, discover the colon descendens ; and, as the child began to vomit meconium, enterotomia was performed in the manner recommended by Callisen, as follows :—The child being placed on the right side, a longitudinal fold of the skin was raised on the left, and a transversal incision, one inch in length, was made midway between the false ribs and the os ilium ; the aponeurosis of the obliquus externus, and some of the fibres of the quadratus lumborum muscles were next divided, and then the colon, distended with meconium, and of a greenish hue, became visible ; the intestine was now seized and opened, allowing a great quantity of meconium and gas to escape ; it was then fixed by several sutures to the skin. The consecutive accidents were erysipelas, stopped by a blister, and enteritis, and peritonitis, which yielded to an application of six leeches, so that the child is now (eighth day) as well as can be expected ; it has gained flesh, the stools are normal and regular, but the mucous membrane protrudes as in all cases of artificial anus. The author concludes with the following remarks :—1*st,* Sabatier, Boyer, and subsequent authors, founding their opinion on the supposed mobility of the descending colon, said that the intestine ought to be fixed to the skin by sutures. This opinion is erroneous ; the colon is motionless, being firmly fixed, anteriorly by the peritoneum, posteriorly by an abundant cellular tissue. Had the suture not been employed in the second case, neither enteritis nor peritonitis would have taken place. 2*d,* The incision of the colon had better be made transversely than longitudinally, because the lips of the wound will not retract so much after the operation. 3*d,* The inferior portion of the colon ought to be examined, so as to ascertain if a communication cannot be established between that intestine and the rectum. Finally, says Dr B., in terminating, I purpose, in six months or a year, endeavouring to form every anus in its normal position ; and would recommend all accoucheurs to introduce the end of a finger into the rectum at the birth of the child,

for the irritation thus caused is sufficient to produce an evacuation if no obstacle exists.—*Medical Times, from the Proceedings of the Académie Royale des Sciences, sitting 26th August.*

MATERIA MEDICA AND DIETETICS.

On the Passage of certain Medicines into the Animal Economy, and on the Modifications which they undergo.—Tartrate of Potass and Soda, &c.

AT the meeting of the Royal Academy of Sciences of Paris, on the 12th of August, M. Millon, in his own name and that of M. Laveran, read a memoir on the passage of certain medicines into the animal economy, and on the modifications which they there undergo.

The authors have made it their object in this memoir to observe the medicine after it had passed under the influence of the organs, to take note of the transformations at its exit from the body, as well as of its physiological effects, and to record whatever useful result might be produced. Their most numerous observations turn on the administration of the tartrate of soda and potass. Of this salt they have taken note of 268 exhibitions ; the sulphate of soda was administered 15 times, sulphur 4 times, and salicine to 10 different patients. In all these observations the medicines were prepared by themselves ; their dose and the exhibition of them were carefully watched over. The changes produced on the substances administered were determined exclusively by the examination of the products of the urinary secretion.

The double tartrate of soda and potass (Rochelle salt) was made the subject of experiment first to test the views of authors on a point which has deservedly attracted attention for some years—the conversion of the organic salts of potass and of soda into the carbonates of the same bases. It is well known to have been inferred from observations made on animals, that the transformation of the alkaline tartrates, citrates, and acetates, into carbonates, is a constant phenomenon. This conversion, according to our authors, is, on the contrary, far from invariable. Of the variability of this effect a general notion is afforded by the following statement : Out of 268 exhibitions of the Rochelle salt, 175 were followed by an alkaline state of the urine in different degrees, 87 by an acid state of it, and in 6 the urine was plainly neutral. By a certain management, the total expulsion of the Rochelle salt by the alimentary canal may be effected. Under this management the passage of the salt by the urine is uncommonly rare. On the contrary, it is in our power to make this salt penetrate by the channels of absorption so as to saturate the urine with an enormous dose of alkaline carbonate. In this case the evacuation of the double tartrate by stool becomes the exception, and its evacuation by this channel is indeed always incomplete.

It was necessary to ascertain in those cases where the urine was acid or neutral if the potass and soda had not nevertheless escaped by the urinary passages, in combination with the tartaric acid still undecomposed or with some other organic acid. It was possible, moreover, that a part only of the alkalies should exist in the urine in the state of carbonates, and that another part should be in combination with some organic acid. The authors describe the analytical process by which they determined these several difficulties. * * * From this process they conclude that the Rochelle salt could not escape by the urinary passages in the state of tartrate, and

when it took the urinary channels it was converted entirely into carbonate.

When the Rochelle salt is taken within a short time in large doses, from 10 to 12 drams at once, its effect is confined chiefly to the intestinal tube. Vomiting is rare, but there are usually several liquid stools. It is an exception that there should be no effect on the bowels, and in this case the urine acquires an alkaline character. On the contrary, prescribed in a small dose, or rather in the fraction of a dose, so that from eight to ten drams are taken in as many hours, this tartrate produces opposite effects. In this case purging is the exception, the alkalinity of the urine is the rule. * * *

The increase in the power of oxidation, rendered very sensible by the presence of urea in excess in cases unfavourable to the absorption of the Rochelle salt, led the authors to make some new trials of its therapeutic application. * * * The acceleration of the oxidizing forces induced them to employ the tartrate in those cases in which it is necessary to improve a languid nutrition. Its efficacy in such cases obtained extensive confirmation. The authors confine themselves to reporting some cases in evidence of the nature of its beneficial tendency. In several cases of hypochondriasis attended with great debility, in phthisis and albuminaria, they have observed a remarkable amelioration under the use of the double tartrate by the method of absorption. But it is above all in the case of diseases characterized by an unusual excess in the secretion of uric acid that the authors advise this mode of cure to be resorted to.

The sulphate of soda was subjected to the same rules as the Rochelle salt. As to sulphur, it was impossible to discover its presence in the urine under any combination.—*Gazette Médicale de Paris*, No. 33, 17 Août 1844.

New Cement for the Teeth.

A NEW cement is proposed for the teeth by Dr Ostermaier, which is founded on the composition of their enamel. This substance, at first soft, hardens on being introduced into the cavity of a carious tooth, and renders the tooth as fit for the office of mastication as those which are still sound.

With 12 parts of anhydrous phosphoric acid 13 parts of pure caustic lime finely pulverized are to be quickly mixed. This mixture becomes soft, so that it may be introduced with ease into the cavity of the tooth, and its exposed surface modelled to the proper figure. Before its introduction the cavity is to be dried with tissue paper. If the mixture be allowed to dry too much before being introduced it becomes useless. This drying takes place within one or two minutes.—See *Journal de Pharmacie*, Août 1844.

PATHOLOGY AND PRACTICE OF MEDICINE.

Recent Additions to Pathology.

Cyanosis.—Dr Stillé has published an able memoir on this subject in the American Journal of Medical Science for July, from which our limits only permit us to make a few brief extracts. Dr S. enumerates sixteen lesions or alterations of structure which dissection has revealed in those affected with cyanosis. He states the two most prevalent theories as to the cause of the disease.

1st, Presence of venous blood in the arterial system (Morgagni, Senac, Corvisart, Caillot, Labat, Bouillaud, Gintrac).

2d, Obstruction to the return of venous blood to the lungs (Louis, Berard, Bertin, Ferrus).

As the first explanation is an exclusive one, Dr S. very properly contends that it must, if true at all, be true of all cases. Five cases are then quoted where the disease existed without any communication by which the admixture could be effected. Not satisfied with this, however, our author next shows, by the citation of four cases, that even where such communications exist " there is no proportion between cyanosis and the degree in which the blood is mixed." This is followed up by two cases which establish the converse of the proposition, and go to prove " that complete admixture of the blood may take place without cyanosis."

It is next shown that in the cases where the admixture of venous and arterial blood can take place, the cause must act uniformly at all periods. But out of 77 cases in which defects permitting this occurred, in only 29 was the colour constant in shade and extent ; therefore " the variation in the extent, depth, and duration of the discoloration is inexplicable by the doctrine of the mixture of the blood."

On these grounds the admixture theory is rejected ; and if the facts on which they are based be correct, the objections are certainly valid.

With regard to the second theory, it is assumed that, if true, it should fulfil the three following indications,—

1. Account satisfactorily for the discoloration of the skin and dyspnœa.
2. Be found in every case of cyanosis.
3. Never exist without the occurrence of cyanosis, or if it does, there must be some satisfactory explanation of this apparent exception.

It is first shown that contraction, obstruction, or obliteration* of the pulmonary artery accounts satisfactorily for the discoloration of the skin and dyspnœa.

2d, That out of the recorded cases, in only 62 was the pulmonary artery examined, and that in 53 of these it was obstructed, contracted, or impervious. Dr S. then enters on an interesting examination of these nine apparent exceptions, and finds that, in every one of them, there were other anatomical peculiarities or lesions sufficient to produce an effect similar to that which would have resulted from changes in the pulmonary artery. The third requisite condition is then shown to be fulfilled, that these obstructions never exist without producing the disease ; therefore,—

1st, It is present in every case of cyanosis.
2d, It never exists without the concurrence of cyanosis.
3d, It is an adequate explanation of the most important phenomena of the disease.

The very meagre outline which we have given is sufficient to show the philosophical character of this paper. As an example of rigid induction applied to medicine, we consider it of great value.

New Diagnostic Sign of Typhoid Diseases.

M. Rauque considers coating like mother-of-pearl of the gums between the molar teeth, and, in cases where leeches have been applied, an indigo colour of the bites, as pathognomic of typhoid fever.—*Journ. de Méd. et de Chirurg. prat. Jan.* 1844.

---

* " Imperforation " is the word employed by Dr Stillé ; we regret he should have thought it necessary to use it.

PRACTICE OF MEDICINE.

Quinine in Ague.—Dr Stratton thinks a single large dose in the interval cures more rapidly than repeated small doses.—*Ed. Med. & Surg. Journ. April* 1844.

Treatment of Neuralgia.—Dr Jacques of Antwerp recommends inoculation, by means of a vaccinating lancet, of a solution of sulphate of morphia. —*Bouchardat's Annuaire de Therap.* 1844.

M. Lafargue recommends inoculation in the same way with a saturated solution of veratria ; and M. Roclauts, a Dutch physician, gives nux vomica in doses of from three to ten grains in the twenty-four hours.

Succinate of Ammonia in Delirium Tremens.—M. Scharn has seen the most furious delirium overcome as by enchantment, and the disease removed in a few hours, by the use of this remedy alone.—*Journal de Pharmacie, March* 1844.

Arsenic in Peritoneal Dropsy.—Dr Debavay has treated a case successfully. One-twentieth of a grain was given twice a-day. The improvement was notable in six weeks, and in six months all symptoms had ceased, and the catamenia, which had been suppressed, were restored.—*Gazette Médicale.*

Mustard in the Convulsions of Children.—Dr Triplu was led to the employment of this remedy as an emetic, and finding it arrest in a few minutes an attack of convulsions that had lasted five hours, he has employed it in three other cases with complete success.—*Forry's New York Journal of Medicine.*

Prophylactic Remedy against Ptyalism.—Dr Schoepf recommends the following tooth-powder during the administration of mercury to prevent salivation. Dried alum powdered, ℈ij. ; powder of cinchona, ℥j. ; to be used by means of a soft brush morning and evening.

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

WE copy from a respected contemporary (No. LXXVI. of the Dublin Journal of Medical Science) extracts on various interesting subjects :—

Hysteric Spasm of the Diaphragm, as it is styled by the author, Dr Ringland, is the first to attract our attention. We have perused the cases attentively which are detailed in illustration of this subject, and we would advise the writer, before he again ventures to come before the professional public, to bestow a little more attention on hysteria than he appears to have hitherto done. Who ever heard of a case of regular hysteria without the diaphragm being implicated ? or who ever witnessed a case of hysteria in which the diaphragm alone was affected ? Dr R. might as well attempt to record cases of fever without any acceleration of pulse. The cases embodied in this communication are in fact genuine examples of a regular hysteric paroxysm, produced by the ordinary causes, such as mental emotion and uterine derangement, and cured by the ordinary remedies. We consider Dr R. much indebted to the patience of the members of the Obstetric Society, and not less so to the condescension of the editors of the Dublin Journal of Medical Science.

Removal of the Uterus by Ligature after Protracted Inversion of the Organ. —Twelve years previously, during labour, the uterus had been inverted. The patient had been attended by a midwife. After the accident she suffered from a variety of uterine complaints, and different opinions had been enter-

tained of her ailments. As in almost all cases of this nature, her disease was at last considered a polypus of the uterus. Upon this supposition the tumour was noosed, but the proceeding occasioned so much pain that it became necessary to remove the ligature. Some time after this attempt, when the patient was in a very critical condition, Dr Esselman was consulted, and entertaining the same opinion of the case as the former practitioner, the use of the ligature was again resorted to. We are not informed by what apparatus it was applied ; but from abundant experience we are satisfied that there is no contrivance equal to that suggested by the late amiable Dr Gooch. Dr Esselman informs us that he was only two years in practice when he undertook the management of this case ; and his injudicious proceeding by tightening the ligature daily, instead of every alternate day, is a sufficient proof of his inexperience. We are indeed astonished the patient was not sacrificed by consequent inflammation. On the 18th day after the application of the ligature, the uterus itself, and not a polypus, dropped into the vagina. There were ulcers in the vagina which emitted an offensive odour ; to these a solution of the nitrate of silver was applied, and the sexual canal was preserved in a proper condition with the solution of the chloride of lime. Except aperients and the occasional abstraction of blood to obviate congestion, no other remedies were required. At the end of a year, from the time the uterus was removed, the catamenia had not returned. In the Dublin Hospital Reports, vol. iii., there are two cases of this nature detailed : the same treatment was pursued ; both the patients had a complete recovery ; and when the system had regained its wonted vigour, the menses in both instances reappeared.

Case of Imperforate Vagina, by J. SQUARE, Esq., Surgeon.—This case is interesting in as far as it is one of those rare instances in which the sexual canal became obstructed at a particular point in consequence of some injury during parturition. A bougie was repeatedly passed through the stricture, and menstruation established. After a time, however, this function ceased, when Mr S., after having secured his patient as if he intended to operate for lithotomy, divided the stricture, which was followed by an immense gush of dark grumous liquid. The os uteri, terminating in a large oval sac, was now felt. A cylinder of oiled silk was introduced to prevent a renewal of the contraction ; and after a time, sexual intercourse, which had been interrupted, could now be performed without inconvenience. We certainly cannot approve of the indelicate exhibition which was made in performing this trifling operation, which might have been fully as well accomplished without any exposure whatever by means of a probe-pointed bistoury, in the hands of any person acquainted with the anatomy of the organs involved.

On some of the Dangerous Complications of Measles, by C. LEES, M. B., &c. &c.—This communication, though devoid of novelty, is nevertheless interesting and creditable to the industry of Dr Lees, who has availed himself of what has been done and said by his brethren both at home and abroad. Measles, under the epidemic form, has recently appeared in Dublin, and been rather fatal. The first complication noticed is dark colour of the papulæ—the rubeola nigra of Dr Willan, we presume—arising from peculiarity of constitution, local circumstances, and the prevailing constitution of the atmosphere. Dr L. attaches particular importance to the influence of the condition of the atmosphere, where a number of children are crowded together in the wards of a public institution, contaminated by the effluvium incessantly emanating from their clothes being continually

drenched with urine. We entirely agree with Dr L. as to the baneful effects of this latter neglect of nurses among infants, both in and out of hospitals, such as inflammation of the large cavities, but especially in the former situation, not only in aggravating, but even causing formidable diseases. A second, and a very formidable complication, is an affection of the larynx; pneumonia is a third; bronchitis, a fourth; and ulceration of the pudendum and rectum a fifth, which last was very formidable. Some of the cases were complicated with peritonitis and enteritis; and others with diarrhœa and lymph on the intestines. In a very excellent communication on measles, published in the same journal in 1842, by Dr James Duncan, there was an observation, by that intelligent physician, which ought to be continually held in view in treating acute diseases of children, viz. that there are several sources from which danger may be apprehended;—the highly developed state of the brain, and of its vessels; the activity of the capillary circulation; and the naturally contracted state of the larynx in young subjects. In *autopsies* of some of the fatal cases, the lungs were found much congested, the minute bronchial tubes very vascular, the edges of the anterior and middle lobes of the lungs presented a well-marked fringe of hepatization, extending about half an inch into the substance of 'the lungs, several extravasated patches beneath the pleura resembling large petechiæ, a dusky red vascularity on the back and on the posterior arch of the tonsils, with a few firmly adherent patches of yellow lymph. The tonsils were unaffected, the epiglottis thickened, covered with lymph, and the subjacent mucous membrane highly vascular. The same morbid appearances extended along the passage to the lining of the larynx, which was vascular and smeared with muco-purulent secretion; the lungs and bronchial glands studded with tubercles, and the liver enlarged, pale, and presenting large white patches which extended into its substance. The epidemic continued during the months of March, April, and early part of May, and was more fatal to the younger children,—those for example below the age of two years, than to those who were older. For those in whom the papulæ were of a dark colour, ammonia was given internally with advantage; fermenting poultices, and afterwards an ointment composed of chloride of lime, opium, and lard, were successfully applied to the ulcers on the pudendum; and stimuli with generous diet afterwards directed. The acetate of lead was given to allay the diarrhœa; but, during an acute attack, we consider this a questionable practice, although it succeeded under the vigilant superintendence of Dr Lees. We regret that our limits will not permit us to give more of this excellent communication.

A New Method of Operating for Hare-lip.—M. Malgaigne commences his incision at the upper part of the lip, carrying it from above downwards by means of scissors, descending as low as possible on each side without detaching the separated portions. The margins of the cleft are then reunited by pins in their whole extent, except towards their free border; the flaps are brought from above downwards, and approximated face to face. The operator then judging of the length which it will be proper to leave them, to prevent the furrow which is afterwards so much to be dreaded at this point, shortens and finishes them as he thinks fit, preserving a piece varying in size according to the extent of the space which he has to fill. Union is afterwards effected by approximating them with interrupted sutures. This plan, when care is observed to place these uniting agents very near the free margin of the lip, is said to prevent the ungraceful furrow which results from such operations where the defect has not been neatly rectified.

Remarkable Case of Malformation of the Heart in a Human Fœtus.—
There was only one large artery given off from the heart, and from this the
pulmonary artery originated.   The thus united aorta and pulmonary artery
was considerably larger than the aorta of so young a child ought to be.   It
proceeded from a large ventricle which appeared at first sight to constitute
the whole of the ventricular portion of the heart.   The pulmonary artery
was separated from the ventricle by a semilunar valve, and from a very
large auricle by a tricuspid valve.   The large auricle communicated by a
small opening with another auricle the size of a small horse-bean, and this
last with a cavity the size of a swan-shot.   The right ventricle and auricle
were separated from each other by small cobweb-membranes, representing
the auriculo-ventricular valve.   Into the layer of the two small cavities
entered the venæ cavæ, which were very small.   Dr Carron, the reporter
of the case, observes, that in this in all other respects well-developed child,
the circulation was reduced to that of a reptile of the lowest order, very
nearly resembling that of a frog.   For three days after birth, the child
seemed in perfect health, but it frequently sighed ; its digestion was regu-
larly performed.   On the third day it sighed frequently, its respiration
was more hurried than usual, it became soporose, and its colour was of a
dusky hue, which pervaded the whole body ; but there was no obvious
diminution of temperature.   It died on the fifth day.

FORENSIC MEDICINE AND MEDICAL POLICE.

Death after Administration of repeated Doses of Phosphorus.

THE following case was recently the subject of a coroner's inquest at Sheffield,
and the rarity of poisoning with phosphorus, besides its own intrinsic in-
terest, induces us to give it a place in our pages.

Mr Rowbottom was requested to visit a child, æt. ten, suffering from
paralysis of one side.   After a week's preliminary treatment, he prescribed
for it a mass containing six grains of phosphorus, to be divided into twenty
pills, and one taken night and morning for a day or two : and afterwards, if
certain symptoms did not take place, then one three times a-day ; these were
continued from May 18 to June 5.   From that date until June 10 the patient
took ten drops three times a-day of sulphuric ether saturated with phos-
phorus ; he then received a mixture containing half a drachm of phosphorus
in an ounce and a half of olive-oil.   Mr R. told him " that he must take
eighteen drops in milk four times a-day,—that the medicine would get
stronger every day" (from the phosphorus dissolving gradually in the oil,
it being solid when he received it),—" that he was to diminish two drops
every dose, and to keep diminishing until he was seen again."   The directions
were carefully repeated ; and the child's father was told in addition, " as
soon as the boy began to be the least squeamish, to stop the medicine."
Two or three days after this he appeared to be suffering from the effects of
the phosphorus, when calcined magnesia and olive-oil mixed with syrup
were administered.   Up to the evening of the 19th, Mr R. told the father
that his child was improving ; but he died on the second night thereafter.

When seen on the evening of the 19th by a surgeon, the child was in a
state of stupor, perfectly insensible, with violent convulsions, quick
breathing, and increased action of the heart, quick palpitation, and the
pulse quick and small, from 140 to 150 per minute.   The medical witness,
on evidence derived from *post mortem* inspection, attributed the child's death

to inflammation of the large intestines and of the brain.   For our own part, we are unable to discover in the account of the dissection any traces of inflammation of the brain,—the large vessels of the organ appear merely to have been distended with blood ; softening of the fornix and corpora striata is mentioned, but its nature is not specified.   The appearances in the intestinal canal, giving evidence of inflammation, were,—about two-thirds down the œsophagus a dark streak an inch and a half in length, and at the lower extremity two or three patches of inflammation just at the termination of the stomach ; in the stomach there were two ulcers, with softening of the mucous membrane at the pyloric extremity, and the organ contained about two ounces of a fluid like coffee grounds, and its anterior surface was of a bright vermilion hue.   " The duodenum was healthy, and contained a similar dark fluid to the stomach ; the small intestines continued healthy to the cœcum ; here, at the commencement of the valve, we found considerable inflammation extending through the whole portion of the colon ; and the large intestines highly inflamed, with thickening."—*Provincial Med. and Surg. Journ. No.* 17, 1844.

It is remarkable that Mr R., who, although not a qualified practitioner, does not appear ignorant of the dangerous nature of the remedy he was employing, should have ventured to give it in such enormous quantity, when less than an eighth part of that taken by this child has been known to cause death in an adult.   Between the 18th of May and the 5th of June the boy must have taken from 12 to 16 grains of phosphorus ; and during the eight days subsequent to this, it is impossible to estimate the quantity exhibited, from the variable strength of the solution in which it was administered.   In Worbe's case, one grain and a half proved fatal in twelve days ; and in M. Julia Fòntanelle's case, three grains were followed by death in seven days.   In fact our only surprise is that Mr Rowbottom's patient remained uninjured so long.   One part of the treatment after the symptoms of poisoning had appeared, viz. the exhibition of olive-oil and syrup, was highly injudicious ; for Orfila has proved by experiment, as we might *à priori* have expected, that the effect of the administration of oil is to increase in a remarkable degree the activity of the poison.

Mr R. stated in evidence that he had " given phosphorus in hundreds of cases with almost miraculous effects."   (Was the patients' recovery one of them?)   He affirmed also, that the " reason phosphorus is not more used is the difficulty of administering it."   We cannot see wherein can lie the difficulty of administering a substance soluble in ether or oil ; and medical men are well aware that it is the uncertain and at times unexpectedly violent action of this substance, which has caused it to be expunged from our pharmacopœias, and disused in practice.

On a review of this case, we would have had little hesitation in giving it as our opinion that the child died from the effects of phosphorus.   It can be no proof to the contrary that no phosphorus was taken for eight days before death ; for the child was seized with symptoms of poisoning with this substance while taking it, its exhibition was stopped, antidotal treatment resorted to, but in spite of this the child died.   It is true that death might have been caused by inflammation of the bowels arising from some other source than the phosphorus ; but it is unnecessary for us to look for any other cause, when we have one before us sufficiently obvious, and adequate to account for all the circumstances of the case, which are in accordance with the known action of the substance.   Indeed, from Mr R.'s own statement, we might almost conclude that the child died from this cause ; for he

directed the antidote to phosphorus to be administered ; and, he says, because his orders respecting its exhibition were not strictly adhered to, "the previous symptoms" (*i. e.* the symptoms of poisoning with phosphorus) " returned." The symptoms are unfortunately rather scantily given ; but the case forms a valuable addition to our knowledge of the toxicology of phosphorus.

Foreign Body accidentally lodged in the Larynx.

" A CHILD, æt. six, accidentally swallowed one of the common brass nails used by upholsterers in covering chairs; the nail did not pass into the œsophagus, but got into the larynx, where it became fixed, and occasioned suffocation. The child was brought in this state to the dispensary, where every means were used for its relief, but in vain. It was at this time completely asphyxiated. The trachea was opened ; a gush of air came from the lungs through the incision, but no inspiration followed, although inflation of the lungs was resorted to. On *post mortem* inspection the nail was found lying in the larynx, with its point upward, in the sinus of the ventricle of the larynx, and its head downward below the glottis. Mr Smith (by whom the case is detailed) observed, that we should not be deterred by the result of this case from attempting to restore animation in cases of asphyxia from similar causes. Some cases were recorded, in which, after tracheotomy or laryngotomy, the lungs had been successfully inflated even when no air had gushed from the wounds."—*Dublin Journal, No.* 75, 1844.

PART IV.—MEDICAL MEMORANDA.

Effects of Revaccination in the Prussian Army.

We find in some of the foreign journals just received an account of the results of revaccination in the Prussian army in the year 1841. It will be interesting, we think, to our readers to compare the result of this revaccination with those which took place some years back, namely, in 1834 and in 1836.

A general revaccination of the Prussian army having been ordered in the year 1834, the results were published in an official document, addressed by the head of the military medical department, Von Wiebel, to the medical officers in the army, and dated Berlin, 23d June 1815.

1. The number of men vaccinated was 44,454
2. Of this number,—
    Had distinct marks of previous vaccination . . 33,634
    Indistinct marks 7,134
    No marks 3,686
3. The present vaccination was,—
    Regular in its course in 16,679
    Irregular 12,287
    Without any result 15,488
4. Of the number in whom the vaccination failed (15,488), 4,530 were revaccinated a second time ; and of these, 866 took the disease, while in the remaining 3,664, no effect was produced.*

* Rust's Magazin, Band xiv., Heft. 1., and Brit. and For. Med. Rev., No. ii.

In the year 1836, another general revaccination of the army took place, with the following results :—

1. The number of men revaccinated was   .   .   .   42,124

2. Of this number,—

    Had distinct marks of previous vaccination   .   .   32,635

    Indistinct   6,645

    No marks   2,844

3. The present vaccination was,—

    Regular in its course in   18,136

    Irregular in   9,940

    Without any result   14,048

4. Of the number in whom vaccination failed (14,048), it proved successful, on repetition, in 1,569, remaining abortive in 12,479.*

During the year 1841, 44,491 men were revaccinated in the Prussian army. Of this number there exhibited distinct marks of previous vaccination, 36,182 ; doubtful marks, 6192 ; and no marks whatever, 2567. In 23,383, the revaccination offered a regular course ; in 3035, an irregular course. In 13,523, it had no result whatever. In 2255 of those in whom the revaccination failed at first, the effect was successful on a second trial ; in 9466, the repetition was unsuccessful. Among the individuals revaccinated in 1841 or before that date, there occurred in one year one case of varicella, eight of varioloid disease, but no case of true variola.

An order has been issued to revaccinate in future all recruits as soon as they enter the service, and to revaccinate a second time in those in whom the first trial fails of effect.—*Gazette Medicale Belge.*

Prescriptions.

Squill obviates some of the ill effects of opium. If an aperient be added besides, the good effects of opium may often be obtained when it would otherwise be inadmissible.

      R. Pulv. opii,

          Pulv. scillæ, āā gr. iii.

          Aloes,

          Conservæ rosæ, āā gr. ix.

Fiat mass. divid. in pill. vi. æquales. Sign, Opiate pills, two at bed-time.

We have remarked very beneficial results in cases of chronic ill health with tendency to dryness of the skin, from the continued use of such combinations as the following. Besides its diaphoretic effect, it should be regarded as alterative.

      R. Resinæ guaiaci,

          Extract. gentianæ, āā Ʒi.

          Pulv. ipecacuanhæ, gr. xv.

Ft. mass. divid. in pill. xxx. æquales. Sign, Tonic alterative pills, two twice a-day.

Or if an aperient be required, aloes may be substituted for the gentian, and then the combination will somewhat resemble the pulv. aloes comp. of the London Pharmacopœia.

A simple and very effectual treatment of the less severe bowel complaints, so apt to prevail at this season, is the following :—

      R. Sulph. magnesiæ,   .   .   .   Ʒss.

        Aquæ menthæ,   .   .   .   Ʒvi.

---

* Medicinische Zeitung, 1837, Nos. 20 and 21.

Solve. Sign, A wine-glassful to be used at intervals of an hour, till the bowels have been distinctly acted on by the medicine, and then a pill containing one grain of opium is to be taken. Even where the pain is considerable, and the case threatens to be severe, this simple plan often succeeds.

———

University of Edinburgh.

ON the 1st of August last, the following gentlemen, 66 in number, received the degree of Doctor in the University :—

> * *Propter dissertationes commendati.*
> * * *Præmiis dignati.*

OF SCOTLAND.

John William J. Anderson, on the Action and Curative Properties of Gallic Acid.

William Cameron, on the Blood and its Morbid Phenomena.

**Alexander Fleming, an Historical and Experimental Inquiry into the Physiological and Medical Properties of the Aconitum Napellus.

James Henderson, on Intus-susception.

Claud Buchanan Ker, on Muscular Fibre.

Kelburne King, an Historical Account of Stricture of the Urethra, with some Remarks on Fistula in Perinæo.

James Lee, on Tetanus.

*Thomas Masson Lee, Observations on Typhus and the Epidemic Fever of 1843.

James Leitch, on Pneumonia.

James Gairdner Lyell, de Vomitu et Remediis Vomitoriis.

John Maitland, on Ulcers—Simple and Specific.

Andrew Scott Myrtle, on Pneumonia, or Inflammation of the Lungs.

Robert Wellbank Macaulay, on the Pathology and Treatment of Dysentery.

Angus M'Leod, on Insanity.

Robert Nicholson, on Pathological Hæmatology.

John Forbes Ogilvie, on Respiration.

David Scott, on the Poisonous and Medicinal Properties of Lead.

John Shand, concerning the Position the Operation at the Ankle-joint promises to hold in regard to Surgery.

John E. S. Stewart, on Dysentery.

**Michael W. Taylor, on the Pathology of the Urinary Excretion.

Laurence R. Thomson, on the Phenomena and different forms of Mental Alienation, with a slight Sketch of the Mental Faculties in a State of Health.

James Vass, on Erysipelas.

James Williamson, on Hydrocephalus Acutus.

Neville Wood, on the Physical and Chemical Constitution of the Blood.

*Richard White Young, on the Signs of Pregnancy.

FROM ENGLAND.

Charles Augustus Adey, on the Scirrhus of Carcinoma, as it usually falls under the eye of the Surgeon.

Alexander Russell Aitkinson, on Pneumonia.

John Byron Bramwell, on Pericarditis.

Frederick James Brown, on the Disorders of Dentition.

Alexander Peile Cahill, on the different Views entertained of the Anatomy of the Urethra.

Edward Charles Chepmell, on Dietetic Observances, with a view to the Maintenance of Physical and Mental Health.
William Harris Clunie, on Pneumonia.
*William Carey Coles, on Epidemic Fevers, intermediate between the Intermittent and Continued Type.
Charles Percy Croft, Observations on Cases of Strangulated Hernia.
Frederick Douglas, on Gonorrhœa.
George Grayling, on the Pathological Changes to which the Blood is liable —their Causes and Effects.
William A. Harland, on Spinal Irritation.
Edmund Hutchison, on Tubercular Phthisis.
James James, on Acute Rheumatism.
Frederick D. Jones, on the Pneumonia produced by the Actions of Narcotic Poisons.
Thomas C. Jones, on Insanity.
Edward John Kennedy, on Inflammation of the Lymphatics.
Charles H. J. B. King, on Pleuritis.
George William Lillies, on Malaria and Miasm.
Charles Palmer, on Strabismus.
*William Peach, on Bronchocele—its History and Treatment.
Joseph Pearson, on Epilepsy.
*Frank Renaud, on the Ovaries—their Anatomy and Physiology, Comparative and Human.
Adrian Stokes, on Delirium Tremens.
*John Richard Wardell, on the Edinburgh Epidemic Fever of 1843.
Thomas Wright, on Ovariotomy.

FROM IRELAND.
Edmund Barry, on Dropsy.
Allan Brown, on Hydrocephalus Acutus.
Patrick Digan, on Pericarditis.
Richard Dyas, on Acute Hepatitis.
William Henry Kent, on Cerebral Apoplexy.
**William Leeper, on General Pathology of Nutrition.
Robert Gillman Lord, on the General Structure, Functions, and Diseases of the Vertebral Column.
*Hugh Pelan, on the Structural Anatomy of the Muscular Tissue, and the Phenomena of Muscular Contraction.
Thomas Swan, on Aneurism.

FROM JAMAICA.
William James T. Bowerbank, on Intermittent Fever.

FROM MADEIRA.
*Alexander Halley, Observations connected with the Natural History and Climate of the Island of Madeira.

FROM MALTA.
Joseph A. R. Harvey, on the Treatment of Popliteal Aneurism by Modified Compression.

FROM THE EAST INDIES.
Henry Huggins Jones, on Intermittent Fever.
James Cook Watson, on Infanticide.

FROM THE WEST INDIES.
William Burt Wright, on Hydrops.

INDEX.

END OF VOL. I.